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BOSTON UNIVERSITY
SCHOOL OF EDUCATION

Service Paper

A REMEDIAL PROGRAM IN FIFTH GRADE READING

by

Mary Alice Doyle

B. S. in Education Boston College, 1942

Submitted in partial fulfilment of the

requirements for the degree of

Master of Education

1945

First Reader: Helen A. Murphy, Assistant Professor of Education

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Approved by

First Reader

Helen A. Murphy

Second Reader

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INTRODUCTION

The writer, after several years of teaching experience in grades seven and eight in the Town of X, was placed in an administrative position which involved responsibility for instruction in all grades. Through the experience in the upper grades, the writer was aware of certain deficiencies and lack of skill in reading in some children.

These children lacked ability to locate information quickly by skimming over irrelevant details and noting main points of a section. They lacked ability to think or question critically that which was being read. They could not work independently of the teacher to organize information in social studies or special fields of reading.

Records of Achievement Tests which had been given over a period of years were on file in the Office of the Superintendent. For the greater part, they were tabulated raw scores or grade levels. It had been the policy to give the tests at the end of the school year. No practical use was ever made of the scores.

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These children lacked ability to locate information quickly by examining over irregularly placed and coding main points of a section. They lacked ability to learn or question critically their own and using words. They could not work independently or in teams to practice instruction in actual reading or reading skills of reading.

Records of achievement tests which had been given over a period of years were on file in the office of the superintendent. For the present, they were tabulated and scores of grade levels. It was then the policy to give the tests at the end of the school year. No special new was ever made of these tests.

As a school administrator, the writer was interested in using test results as the basis for the improvement of instruction. Therefore a testing program was begun and following an analysis of the results, a remedial program was developed.

Since it appeared to be present, there was need for a testing program which would measure the abilities of the individual pupil. In order to establish the proper attitude toward the tests by all concerned, purposes of a testing program were discussed. The purposes were discussed from the point of view of the administrator and of the teacher.

A. The teacher's testing purposes

1. EDUCATIONAL GUIDANCE OF EACH PUPIL THROUGH HIS OR HER EDUCATIONAL CAREER. This is probably the most important purpose which can be served by standard testing. It is folly to go to the expense of money and effort to administer such a program, if nothing comes of it.

2. CLASSIFICATION OF PUPILS. After pupils have been promoted, or when new pupils may enter the school, much hit-or-miss practice has been indulged in without use of test results for proper classification on the grade level.

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CHAPTER I PRELIMINARY PROCEDURE

A general meeting of classroom teachers was called by the writer. The observed deficiencies as mentioned in the introduction were presented to the teachers. It was admitted by the group as a whole, that if the above mentioned deficiencies appeared to be present, there was need for a testing program which would measure the abilities of the individual pupil. In order to establish the proper attitude toward the tests by all concerned, purposes of a testing program were discussed. The purposes were discussed from the point of view of the administrator and of the teacher.

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3. SECTIONING OF PUPILS. When pupils are put into a grade, often further sectioning is needed that groups may be formed that can work together most cooperatively, most helpfully, most congenially.

4. STUDY OF INDIVIDUALS. Some teachers desire more than casual observation of their pupils. They desire to know whether each pupil is progressing as well as, or better than, other pupils; and whether a given pupil is doing as well in all his subjects as he is in given subjects.

5. COMPARISON OF A PUPIL'S ACHIEVEMENT IN LEARNING WITH HIS ABILITY TO LEARN. By use of both intelligence tests and achievement tests at the same time you may see whether a child having a mental age of twelve years has achieved an educational age of twelve years.

6. DIAGNOSIS AND CORRECTION OF DEFICIENCIES OF PUPILS' WORK. With a diagnosis of deficiencies of pupils' work, the teacher may proceed more intelligently than she could when she was only guessing.

7. MOTIVATION OF SCHOOL WORK. It is both feasible and possible to make the testing program of a classroom or of a school become a continuing stimulus for better school work.

8. ADAPTATION OF THE CURRICULUM. Standard testing

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will show whether there are curriculum deficiencies or excellences.

9. DIFFERENTIATION OF METHODS. It is one of the most fundamental principles of teaching to take each pupil as he or she is, with reference to what the teacher may guide him or her into becoming, or to take each section or group as it is with reference as to what it may become. You start teaching a pupil where he is, not where you wish he were. So, when standard tests reveal in a room some pupils low in subjects, your methods must provide the material and illustrative matter and drills, or what not, which minister to each one's peculiar needs.

10. KNOWLEDGE OF THE EDUCATIONAL NEEDS OF EACH PUPIL AND OF EACH CLASS ALL THE TIME. The ordinary class test does not give the teacher this knowledge. Bradley¹ found from ordinary class tests a great degree of variation in the high school teachers' marks in examination papers.

¹Bradley, J. E. Teachers' Marks, an unpublished Master's Thesis, University of Tennessee, 1934, pp. 17-32; 71-73.

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B. The administrator's testing purposes

While all the purposes hereinbefore explained are also pertinent to the administrator's needs, there are certain testing purposes of predominant value to the administrator. Some of the more important ones are explained below.

1. DETERMINING INSTRUCTIONAL LEVELS

a. OF EACH SCHOOL. Naturally enough, both the administrator and the board of education wish to know the level of achievement made by and in each school. The use of standard tests enables them to ascertain such information about each school as may be directly comparable with national norms.

b. OF THE TEACHER'S WORK. The administrator, by giving study to the results of standard intelligence tests and to the results of standard achievement tests in the several subjects, may ascertain to what level of efficiency the teacher has brought her class.

2. COMPARISON OF INSTRUCTIONAL EFFECTIVENESS WITH INSTRUCTIONAL EXPECTANCY. The administrator may use the results of standard tests not only to compare actual achievement with ability to achieve in each separate school and in the system as a whole, but he may also compare school with school and subject with subject, and

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all with norms of national validity. He can predict about what these children can do under good teaching; he can later ascertain to what extent the instruction given has been effective in producing results to be normally expected.

3. ASCERTAINMENT TO WHAT EXTENT THE INTELLECTUAL AIMS OF THE COURSE OF STUDY ARE BEING REALIZED. There are aims which are moral, social, affective and sentimental, the attainment of which cannot be now measured satisfactorily with the existing instruments and tests. On the other hand large parts of the aims of education are intellectual, and the degree of accomplishment of those aims is measurable by standard tests.

After studying available tests it was the unanimous decision of teachers and writer that the Good Tests of Basic Skills¹ answered all the afore mentioned purposes.

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SELECTING THE TEST

A test which was to accomplish the purposes mentioned in the Preliminary Procedure should have the following features.

- (1) Be long enough to guarantee extensive sampling.
- (2) A certain ease in scoring the test.
- (3) Careful and complete directions for administering and scoring.
- (4) An agreement, in general, between test content and recognized curriculum practice.
- (5) A complete manual, which, in addition to the data customarily found in manuals, would contain wise cautions for interpreting test scores and valuable suggestions for remedial instruction.

After studying available tests it was the unanimous decision of teachers and writer that the Iowa Tests of Basic Skills¹ answered all the afore mentioned purposes.

It is of each pupil, in order that instruction and guidance may be better adapted to his individual needs, interests, and abilities.

A secondary but also important purpose is to provide the school official with a more objective and dependable basis for the evaluation of school and class achievement.

¹ Published by Houghton Mifflin Company, Boston

Instructional factors, the test results may be used by the

SELECTING THE TEST

A test which was to accomplish the purposes mentioned in the preliminary proposals would have the following characteristics:

- (1) It would require no extensive equipment.
- (2) A certain score in passing the test.
- (3) General and adequate directions for administering the test.
- (4) An assessment, in general, of the test's value and recognized educational practice.
- (5) A complete manual, which, in addition to the data previously found in manuals, would contain a number of suggestions for interpreting test scores and valuable suggestions for remedial instruction.

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¹ Prepared by Margaret Kilgus, Boston.

CHAPTER II DESCRIPTION OF TESTS USED

The Iowa Every-Pupil Tests of Basic Skills provide for the measurement, at the third to eighth grade levels, of certain of the skills involved in reading, work-study, language and arithmetic. These skills are all crucial in the whole educational development of the pupil, and largely determine the extent to which he can profit from later instruction. Periodic, reliable measurement of the development of these skills is, therefore, essential, not only for effective supervision of instruction and individualization of teaching in the grades, but also for adequate educational guidance of the pupil before, at, and after entrance into the senior high school.

The primary purpose of these tests is to enable teachers and school officials to become more intimately and reliably acquainted with the educational accomplishments and capabilities of each pupil, in order that instruction and guidance may be better adapted to his individual needs, interests, and abilities.

A secondary but also important purpose is to provide the school official with a more objective and dependable basis for the evaluation of school and class achievement. To the extent that pupil accomplishment is dependent upon instructional factors, the test results may be used by the

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administrator as indirect measures of the effectiveness of instruction within his school and for the direction of his supervisory activities.

These tests should have their principal value then, in determining those specific aspects of the pupil's development most in need of individual attention, and in planning remedial and individualized instruction. They should also prove highly valuable to the administrator or supervisor in identifying those aspects of the whole instructional program most in need of increased emphasis and attention, that is, in locating areas in which increased supervisory "drive" is needed or in which curriculum reorganization is desirable. They should be helpful to the administrator, as well as the teacher, in providing a more adequate basis for the long-time educational guidance of the individual pupil. If properly used, the test results should prove effective in motivating both teachers and pupils to increased and better directed effort in both teaching and learning.

This requires that the whole record of the pupil be analytical, specific and dependable. The authors have recognized the skills which are so essential to successful school accomplishment and have built tests around those skills.

A striking feature of the Iowa Tests of Basic Skills is the new technique for scoring the tests. Formerly the

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A striking feature of the Iowa Tests of Basic Skills is the new technique for scoring the tests. Formerly the

length of time it took to score the four and two-thirds hours of pupil work was nearly prohibitive unless cheap clerical labor was available. The scoring time and errors should be considerably decreased by the new method.

The scoring key is of heavy cardboard with spaces or windows cut out where the correct answers are supposed to be checked. All that the scorer has to do is to lay the key over the paper and count the spaces in which checks show through. There is no checking of right or wrong items, no looking from answer to key. For most of the tests, these operations have been eliminated. The saving of time and improved accuracy is clearly apparent.

Another clever trick is utilized in scoring Test A. The test has the questions dealing with paragraph comprehension, understanding of details, and organization of ideas all mixed together, yet each phase is scored separately. Ordinarily, to locate the question on each page dealing with paragraph comprehension and to score them would be very laborious. The use of a heavy black line connecting the openings through which show the correct answers to the questions dealing with paragraph comprehension, makes it possible to quickly count the correct answers to one type of question. Following other kinds of lines gets scores for the other two parts. It is obvious that the scoring of the tests has been greatly improved.

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Another device which is utilized in scoring tests is the use of the questions dealing with paragraph comprehension, understanding of details, and organization of ideas all mixed together. For each phase is scored separately. Ordinarily, to locate the question on each page dealing with paragraph comprehension and to score them would be very tedious. The use of a heavy black line connecting the questions through which show the correct answers to the questions dealing with paragraph comprehension, makes it possible to quickly count the correct answers to the type of question. Following other kinds of lines are notes for the other two parts. It is obvious that the scoring of the tests has been greatly improved.

The norms of the Iowa Every-Pupil Tests of Basic Skills serve two major purposes. They facilitate the interpretation of the score of the test and make possible a comparison between scores on different tests.

No claim is made that the norms provided for the Iowa Every-Pupil Tests of Basic Skills are representative of country-wide achievement, although it is highly probable that they compare favorably in this respect with any or most of the so-called national norms that have thus far been established for the better standardized achievement tests now on the market. The norms established for the Basic Skills Tests are best characterized as Middlewestern norms. The majority of the schools tested were located in Iowa, but a significant proportion were included from Illinois, Wisconsin, Missouri, Minnesota, Nebraska, North Dakota, and South Dakota, with a few scattered schools in other states.

Without the possibility of comparing scores on different tests it would be impossible to establish an educational achievement profile for a pupil or to determine those specific areas of achievement in which his performance has been relatively strong or relatively weak. The important consideration in relation to this purpose is that the norms for each of the tests between which comparisons are to be made be established for the same pupils and schools and under the same conditions. The exact nature of the population for which they

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are established becomes, in this case, relatively less important.

Another of the distinguishing features of the Iowa Every-Pupil Tests of Basic Skills is the provision of a standard permanent profile chart on which the test profiles of an individual pupil may be cumulatively recorded over a period of six years.

The standard profile chart may thus be used with any edition of the tests and at any grade level; hence, it constitutes a permanent individual cumulative record form on which the pupil's test results may be recorded in grade equivalents over a six-year period. Thus, when the results of future testings have been recorded for the pupil, it will be possible to identify the abilities in which he has made the most rapid relative growth, as well as those in which his performance was relatively high or low at any given testing. The advantages for guidance purposes of such a permanent record for each pupil that may be passed on with him from grade to grade are too obvious to require discussion.

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CHAPTER III TESTING PROGRAM

Following the choice of the tests, the manual of directions for administering and scoring was studied by all the classroom teachers at a meeting called by the writer.

The tests were given and corrected by the classroom teachers.

The writer desired to make the wisest use of the tests that it was humanly possible to make, because any testing program has value only to the extent that the results contribute to the improvement of classroom teaching. No one denies that a testing program is expensive but valuable and necessary for any school system, but it is an extravagance and never justifiable when the results are not used.

In making use of the results of any test, the administrator must bear in mind that the performance of a class of pupils upon tests of the Iowa Every-Pupil Tests of Basic Skills or any tests is conditioned by a great many factors and before making any comments on the results or passing any judgement on the effectiveness of the instruction of an individual teacher or teachers, answers to the following questions should be given.

1. What is the level of intelligence of the pupils in this class? (Records in Superintendent's Office were consulted.)

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The writer desired to make the widest use of the tests that it was humanly possible to make, besides any testing program has value only to the extent that the results contribute to the improvement of classroom teaching. He was doubtful that a testing program is expensive but valuable and necessary for any school system, but it is an extraordinary and never justifiable when the results are not used.

In making use of the results of any test, the administrator must bear in mind that the performance of a class of pupils upon tests of the Iowa Twenty-Fifty Tests of Skills and Abilities is a reflection of a group's ability and before making any comments on the results or passing any judgment on the effectiveness of the instruction of an individual teacher or teacher, answers to the following questions should be given.

1. What is the level of intelligence of the pupils in this class? (Results in representative's IQ test were considered.)

2. How adequately is the teacher supplied with effective instructional materials?

3. What kind of instruction did these pupils have in the earlier grades? How far had they progressed before they entered this class?

4. With what quality of supervisory service has this teacher been provided?

5. How large a teaching load does this teacher have?

6. For what extra-curricular duties is she responsible?

7. From what type of social environment do these pupils come?

8. What is the general attitude toward work that pervades the whole building?

9. How good, and how well correlated, is the instruction which these pupils are now receiving in other classes?

(It should be remembered that the reading teacher is not the only one who is teaching reading, the arithmetic teacher not the only one who is teaching arithmetic, etc.)

10. Considering the provisions that are made for certain skills in the local course of study (for which the teacher surely is not wholly responsible), is it to be expected that the pupils will do well on a test of those skills?

12

3. How adequately is the teacher supplied with effective

instructional materials?

4. What kind of instruction did these pupils have in

the outline presented how far had they progressed

before they entered this class?

5. With what quality of supervisory service are these

teacher been provided?

6. How large a teaching load does this teacher have?

7. For what extra-curricular duties is she responsible?

8. From what type of social environment do these pupils

come?

9. What is the general attitude toward work that pervades

the whole community?

10. How good, and how well coordinated, is the instruction

within these pupils the new teaching in other classes?

(The model so recommended that the teaching teacher is

not the only one who is teaching, the whole

community teacher and the child can be teaching with-

outside, etc.)

11. Considering the prevailing state of affairs for certain

while in the local course of study for which you

teach, how is the local course of study (for which you

are responsible) is not really responsible, is it to

be expected that the pupils will do well on a test

of these skills?

The writer because of being in a supervisory position over a period of years was aware of the answers to the preceding questions.

In some instances, the writer was confident that the results of the test were due to the low level of intelligence of the pupils in certain groups and that in another group it was due to poor methods of instruction in preceding grades.

ANALYSIS OF RESULTS

In the use of test results for instructional appraisal, it is extremely important to recognize that a norm is only a description of average achievement in all schools and may not be considered as a standard, or as an indication of what constitutes "satisfactory" achievement. The average achievement in all schools varies in quality or adequacy from subject to subject. It may very well be true, for example, that the schools in general are giving much more adequate attention to the development of arithmetic than to map-reading skills, and that the latter skills are being seriously neglected even in the schools that earn the highest averages on the map-reading test. In a school, then, whose average score is below the norm in arithmetic and above the norm in map-reading, the need for improved instruction may, nevertheless, be more serious in map-reading than in arithmetic.

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What constitutes satisfactory performance, or what is an acceptable standard, can only be determined subjectively, and will differ from school to school. In some courses of study, no formal instruction in certain map-reading skills may be provided before the seventh grade; in other schools, the same skills may be introduced in grade five. Either procedure may be equally defensible in the light of present knowledge. Each school must decide, therefore, in terms of its own objectives and curriculum organization in relation to the content of the test, what may reasonably be expected of its pupils. Certainly a below-the-norm performance on any test is not necessarily an indication of poor teaching or of weaknesses in the curriculum, nor is an above-the-norm performance necessarily to be commended. In general, considering the wide variation in the quality of achievement from school to school and the generally admitted fact that there are very few schools in which there is not plenty of room for improvement, the "norm" may be too low to be considered as a standard or goal of achievement in any progressive school.

This distinction between norms and standards is equally important in the interpretation of test results for individual pupils.

Since the educational guidance of the individual child is the primary objective of education, it is obvious that

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This distinction between norms and standards is equally important in the interpretation of test results for individual pupils.

Since the educational guidance of the individual child is the primary objective of education, it is obvious that

the teacher must analyze a test for the errors of each pupil. This was done in the case of each child. Because there were some errors which were common to many in the group, the errors were tabulated for the purpose of dividing the group.

Table I shows the errors in September on Comprehension. The test on Comprehension involves two skills and for the purpose of tabulation they are classified as Skill A and Skill B and defined as follows:

Skill A

To recognize the main idea or topic of a paragraph.

Skill B

To grasp an idea not explicitly stated in the paragraph.

	12	3	4	7
To grasp an	23	3	3	3
idea not	15	14	23	17
explicitly	16	10	19	19
stated in the	29	4	23	22
paragraph	52	6	10	9

Grouped by individual group

CONCLUSION -- The group had perfect scores and 10 had the greatest number of errors in majority of items.

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Skill B

To know an idea and explicitly stated in the

paragraph.

TABLE I

September

Errors

Skill A	Items	Grade 5A 22 Pupils	Grade 5B 29 Pupils	*Grade 5C 24 Pupils
	3	8	11	15
	7	2	7	18
To recognize	9	12	16	14
the main idea	14	12	6	10
or topic of a	18	5	9	9
paragraph	21	15	15	16
	42	16	10	22
	49	5	5	9
Skill B				
	11	3	4	7
To grasp an	12	3	2	5
idea not	15	14	23	17
explicitly	16	10	19	19
stated in the	29	4	25	22
paragraph	52	6	10	9

*To be remedial group

CONCLUSION -- No grade had perfect score and 5C had the greatest number of errors in majority of items.

TABLE I

Geological

Notes

Well A	Grade 25 25' depth	Grade 25 25' depth	Grade 25 25' depth	Grade 25 25' depth
To recognize	3	8	21	12
the same idea	9	2	7	12
or both of a	9	12	12	14
particular	12	12	4	10
	12	2	8	2
	21	12	12	12
	22	12	10	22
	22	2	2	2
Well B				
To study on	12	2	4	7
less not	12	2	2	2
existing	12	12	22	22
added in the	12	10	10	10
particular	22	4	22	22
	22	2	10	2

(1) Geological Group

Geological -- no grade but period score 22 to 22

The greatest amount of errors in majority of items.

Table II shows the errors in Skill C in September

Tables II and III show errors in skills in location and understanding of details and for the purpose of tabulation are classified as Skill C and Skill D and are defined as follows:

Skill C	Item	Grade 14 22 Pupils	Grade 15 29 Pupils	Grade 16 24 Pupils
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Skill C

To recognize and understand an explicitly stated fact.

Skill D

To recognize and understand implied facts and relationships.

Tables II and III show errors in skills in location and understanding of details and for the purpose of location are classified as Skill C and Skill D and are listed as follows:

Skill E

To recognize and understand an explicitly stated

fact.

Skill D

To recognize and understand implied facts and

relationships.

Table III shows the errors in Skill B in September

Table II shows the errors in Skill C in September

TABLE II

September

Skill C	Item	Errors		
		Grade 5A 22 Pupils	Grade 5B 29 Pupils	Grade 5C 24 Pupils
To recognize and understand an explicitly stated fact	1	0	0	5
	2	2	12	7
	4	2	3	6
	8	0	7	7
	20	7	10	11
	22	4	8	12
	25	11	9	18
	26	21	4	3
	33	12	14	21
	36	17	11	21
	37	14	5	17
	46	17	11	11
	47	13	16	18
	57	11	16	17
	53	5	10	13
	54	8	11	16
	55	19	15	28
	56	11	11	15

Table II shows the errors in Skill 6 in September

TABLE II

September

Errors

Skill 6	Item	Grade 2A 22 pupils	Grade 2B 24 pupils	Grade 2C 24 pupils
	1	0	0	2
	2	2	12	7
To recognize and	4	2	3	6
understand as	8	0	7	7
explicitly	20	7	10	11
related facts	22	4	8	12
	25	11	9	16
	26	21	4	3
	32	12	14	21
	36	17	11	21
	37	14	2	17
	40	17	11	11
	43	12	16	16
	57	11	16	17

Table III shows the errors in Skill D in September

Table III

Tables IV and V show September errors in the organization of ideas and for the errors of tabulation are classified as Skill E and F and defined as follows:

Skill D	Item	Grade 5A 22 Pupils	Grade 5B 22 Pupils	Grade 5C 22 Pupils
To recognize and understand implied facts and relationships	5	8	14	14
	6	0	7	11
	13	0	2	8
	17	5	6	8
	19	9	7	13
	23	10	11	14
	24	10	10	14
	34	12	2	14
	35	15	6	21
	38	20	16	20
	39	18	9	19
	40	20	9	23
	42	16	10	22
	43	10	18	21
	45	3	7	7
	53	3	10	15
	54	8	13	16
	55	19	15	19
	58	11	11	15

Table III shows the errors in Skill C in September

Table III

September

Errors

Skill D	Item	Grade 5A 25 Pupils	Grade 5B 25 Pupils	Grade 5C 25 Pupils
	1	8	14	14
	2	0	7	11
To recognize and	13	0	5	8
understand	17	5	5	3
implied terms	19	9	7	13
and relationships	23	10	11	14
	24	10	10	14
	34	15	2	14
	35	15	5	21
	38	20	15	20
	39	18	9	19
	40	20	9	23
	42	15	10	23
	43	10	18	21
	45	3	7	7
	53	3	10	15
	54	8	13	15
	55	19	15	19
	56	11	11	15

Table IV shows the errors in Skill E in September

Tables IV and V show errors in skill in the Organization of Ideas and for the purpose of tabulation are classified as Skill E and F and defined as follows:

Skill E

To recognize common elements in incidents or paragraphs.

Skill F

To recognize proper time sequence.

Table V shows the errors in Skill F in September

TABLE V

September

Errors

Skill F	Items	Grade 54 17 Pupils	Grade 58 29 Pupils	Grade 52 24 Pupils
To recognize proper time sequence	26	11	18	13
	44	5	12	10
	48	6	13	16
	31	8	20	12

23

Testes IV and V show errors in skill in the organization of ideas and for the purpose of legislation are classified as Skill B and C and defined as follows:

Skill B

To recognize common elements in incidents or

paragraphs.

Skill C

To recognize proper time sequence.

Table IV shows the errors in Skill E in September

TABLE IV

September

Errors

Skill E	Items	Grade 5A 22 Pupils	Grade 5B 29 Pupils	Grade 5C 24 Pupils
To recognize common elements in incidents or paragraphs	50	9	18	10
	56	11	15	17

Table V shows the errors in Skill F in September

TABLE V

September

Errors

Skill F	Items	Grade 5A 22 Pupils	Grade 5B 29 Pupils	Grade 5C 24 Pupils
To recognize proper time sequence	26	11	18	13
	44	5	12	10
	48	6	13	16
	31	8	20	12

Table IV shows the errors in Skill I in September

TABLE IV

September

Errors

Skill I	Items	Grade 2A 22 Pupils	Grade 2B 29 Pupils	Grade 2C 24 Pupils
To recognize non- elements in incidents or paragraphs	20	9	18	10
	26	11	12	17

Table V shows the errors in Skill I in September

TABLE V

September

Errors

Skill I	Items	Grade 2A 22 Pupils	Grade 2B 29 Pupils	Grade 2C 24 Pupils
To recognize proper time sequence	26	11	18	13
	44	2	12	10
	48	6	13	16
	51	3	20	12

A CHART FOR A PLANNED REMEDIAL PROGRAM

Evidence of Deficiency	Remedial Suggestions
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CHAPTER IV REMEDIAL PROGRAM

With the results analyzed, the next step was to plan the program for remedial work with Grade 5C. This class was chosen because the teacher realized the significance of the results of the test and felt that she had been professionally challenged. It would have been impossible for the writer, as the administrator, to carry out the program because it must, by its nature, be a daily one.

The first aid given to the teacher was a chart which was comprehensive, brief and definite.

Uninteresting material	Provide interesting material
Too much oral reading	<p>Silent reading of commands or directions from flash cards -- to do what card or cards tells them to do.</p> <p>In all silent reading, have them pretend they are reading <u>books</u> -- reading who never move their lips.</p> <p>(Successful activity)</p>
Material too difficult	<p>Use easier material.</p> <p>Create a desire for more difficult material. Let the child be led to it gradually by leading him to increase his vocabulary.</p>

Lack of comprehension

CHAPTER IV
REMEDIAL PROGRAM

With the results analyzed, the next step was to give the program for remedial work at the grade 50. This plan was chosen because the teacher realized the significance of the results of the test and felt that she had been professionally challenged. It would have been impossible for the writer, as the administrator, to carry out the program because it went, by its nature, to a daily one. The first aid given to the teacher was a chart which was comprehensive, brief and definite.

A CHART FOR A PLANNED REMEDIAL PROGRAM

Evidence of Deficiency	Diagnosis	Remedial Suggestions
Lack of interest in reading	Physical defects Poor concentration	See school nurse for aid in correction. Give pleasing and interesting introduction to all reading lessons. Give good motive questions.
Lack of speed	Lack of vocabulary	Give good phonic word drills
	Shyness	Make the child feel you are his friend. 1. Ask him to read to one of his classmates. 2. Ask him to read to you. 3. Ask him to read to several and finally to the whole class.
	Uninteresting material	Provide interesting material
	Too much oral reading	Silent reading of commands or directions from flash cards -- to do what card or board tells them to do. In all silent reading, have them pretend they are <u>men</u> and <u>women</u> reading who never move their lips. (purposeful activity)
Lack of comprehension	Material too difficult	Use easier material. Create a desire for more difficult material. Let the child be led to it gradually by helping him to increase his vocabulary.

A CHART FOR A READING REHABILITATION PROGRAM

Evidence of Deficiency	Diagnosis	Remedial Suggestions
Lack of interest in reading	Physical defects Poor concentration	See school nurse for aid in correction. Give classroom and interesting material. Give good native language.
Lack of vocabulary	Lack of vocabulary	Give good phonics word drills.
Lack of comprehension	Lack of comprehension	Have the child tell you and his friend. 1. Ask him to read to one of his classmates. 2. Ask him to read to you. 3. Ask him to read to several and finally to the whole class.
Lack of fluency	Lack of fluency	Uninteresting material. Uninteresting material.
Lack of accuracy	Lack of accuracy	Too much oral silent reading of commands or directions from flash cards -- to be what card or word tells them to do.
Lack of motivation	Lack of motivation	In all silent reading, have them discuss they and what they read. Reading the novel have their light. (purposeful activity)
Lack of progress	Lack of progress	Give better material. Create a desire for more difficult material. Use the child as far as is possible by helping him to improve his vocabulary.

Evidence of Deficiency	Diagnosis	Remedial Suggestions
Lack of ability to find information	Getting words instead of thoughts	Never allow the child to begin reading without good questions for which he must find the answers.
Lack of interest in recreational reading	Omissions Substitutions Mispronunciations	Through a standard oral reading test, discover the errors. Give drills on correct forms.
Lack of speed	Lack of concentration	Arouse interest with pleasing introduction. Give very definite assignment. Give good motive questions.
Lack of appreciation	Vocalization Lack of comprehension	See above.
	Incorrect eye movements	Use short exposure thought groups found in reading lesson.
Inability to use dictionary	Lack of speed drill	Create a spirit of competition by use of graphs.
Lack of ability to organize	Lack of comprehension	Give good motive questions that will call for: <ol style="list-style-type: none"> 1. The main thought of a sentence. 2. The main thought of a paragraph. 3. The main thought of a page.
Lack of interest in oral reading		
Lack of interest in information reading	Lack of knowledge concerning sources of information	Find the pupil's interests. Acquaint him with sources of information concerning those interests.

Remedial Suggestions	Diagnosis	Evidence of Deficiency
Never allow the child to begin reading without good questions for which he must find the answers.	Getting words instead of thoughts	
Through a standard oral reading test, discover at the start. Give drills on correct forms.	Mispronunciations	
Arouse interest with pleasing illustrations. Give very definite assignment. Give good motive questions.	Lack of comprehension	Lack of speed
Use short exposure. Use short exposure. Found in testing lessons.	Vocalization Lack of comprehension	
Create a spirit of competition by use of graphs.	Interest eye movements	
Give good motive questions that will call for:	Lack of speed drill	
1. The main thought of a sentence. 2. The main thought of a paragraph. 3. The main thought of a page.	Lack of comprehension	Lack of ability to organize
Find the pupil's interests. Associate him with sources of information concerning those interests.	Lack of knowledge concerning sources of information	Lack of interest in information reading

Evidence of Deficiency	Diagnosis	Remedial Suggestions
Lack of ability to find information	Same as above	Acquaint the pupil with methods of finding data. Encourage enlargement of reading vocabulary by <u>good word drills</u> . (Individual)
Lack of interest in recreational reading	Lack of knowledge of the joy that comes with reading.	Read parts of interesting stories. Let pupils finish them. Have interesting books for him to read. (Individual)
Lack of appreciation	Lack of power of visualization	Discover interests of pupils. Read to him, picturing scenes to him. Show him the power of the voice. Instill within him desire to gain this ability. Select passages of literature which contain vivid pictures or strong emotion for reading exercises.
Inability to use dictionary	The pupil has not had the proper training in the use of the book.	Present it as a most helpful and interesting book. Through interesting drills, teach use of book.
Lack of interest in oral reading	Self-consciousness. Lack of interest in material. If all the class has the same material, the pupil does not see the need of his reading orally.	Require him to bring material in which he is interested, to read to the class - something new to the class. (Development of Child)

Remedial Suggestions

Acquaint the child with methods of classifying words. Encourage enlargement of reading vocabulary by word study. (Individual)

Read parts of interesting stories. Let pupils finish them. Have interesting books for him to read. (Individual)

Discover interests of pupils. Read to him, explaining scenes as he goes. Show him the power of the voice. Instill within him desire to gain this skill. Select passages of literature which contain vivid pictures of strong emotion for reading exercises.

Treat him as a reader. Present him with interesting books. Through interesting drills, teach him to read. (Individual)

Reading him to bring material in which he is interested. Let him read to the class something new to the class. (Movement of Unit)

Evidence of Latency

Lack of ability to find information

Same as above

Lack of interest in recreational reading
Lack of knowledge of the joys of reading
Lacks with reading

Lack of appreciation of visual action

Inability to use dictionary

The pupil has not had the proper training in the use of the book.

Lack of interest in oral reading
Self-consciousness
Lack of interest in reading
It is essential that all the class has the same material. The child does not use the book of his reading orally.

Evidence of Deficiency	Diagnosis	Remedial Suggestions
Lack of interest in oral reading (cont'd.)	He has been given no motive for reading orally.	Give him opportunity to read to those who will appreciate, that he may obtain the joy which comes in reading to others.

The second step was the study by administrator and teacher of the definite suggestions given in the manual.¹

SUGGESTIONS FOR DEVELOPING PARAGRAPH COMPREHENSION AND ABILITY TO NOTE AND COMPREHEND DETAILS:

1. Have children state, orally or in writing, their own topics of headings for a given paragraph.
2. Make use of exercises in filling in blanks, answering multiple-choice questions and completing sentences to develop comprehension. (The test items will suggest some exercises of this type.)
3. Frequently give the directions for the daily lessons in written form rather than orally, so that children become used to following printed directions understandingly.
4. In considering new words, emphasize meanings and use in context rather than the phonics of the words.

¹Manual for Interpretation of Iowa Every-Pupil Tests of Basic Skills, published by Houghton Mifflin Company

Evidence of Participation Diagnosis Remedial Suggestions

<p>Give the opportunity to read the copy who will appreciate that he may obtain the joy which comes in reading to others.</p>	<p>He has been given no active role in reading orally.</p>	<p>Lack of interest in oral reading (comprehension).</p>
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The second step was the study by administrator and teacher of the definite suggestions given in the manual. This was followed by a discussion of the suggestions and their application to the classroom situation.

1. Give children ideas, orally or in writing, their own topics of interest for a given paragraph.
2. Make use of exercises in filling in blanks, answering multiple-choice questions and completing sentences to develop comprehension. (The test items will suggest some examples of this type.)
3. Frequently give the directions for the daily lessons in written form rather than orally, so that children become used to following printed directions rather than oral directions.
4. In reading new words, emphasize meaning and use in context rather than the phonics of the words.

5. In no case, from the first grade on, permit verbalism, the mere reading of words. Insist that children know what they are reading about.
6. From several possible topics or headings for a given paragraph, have pupils choose the best headings. (See test items.)
7. Have children underline or choose the topic sentence of each paragraph or the sentence which best tells what the whole paragraph is about, or have them tell what the purpose of the paragraph is.
8. Have children make up questions which the material answers or prepare answers to questions about the material.
9. Have children summarize material read, stating clearly the main ideas or important points of a paragraph or section. To do this orally may save time. (It is essential, at least in the first lessons on this skill of giving the main idea, that materials be chosen which are really thought units and which have one definite and clearly expressed central idea. It is desirable to begin drill upon paragraphs in which this main idea is expressed by a topic sentence, and gradually work up to more difficult paragraphs in which the main idea can best be expressed by phrases other than those found in the paragraph.)

5. In no case, from the first paragraph, select headings, the first heading of words. Indicate that headings show what they are reading about.

6. From several possible points or headings for a given paragraph, have pupils choose the best heading. (See last item.)

7. Have children underline or choose the topic sentence of each paragraph of the sentences which best tell what the whole paragraph is about, or have them tell what the purpose of the paragraph is.

8. Have children make up questions which the material answers or prepare answers to questions about the material.

9. Have children summarize material read, stating clearly the main idea or important points of a paragraph or section. To do this really may save time. It is essential, at least in the first lessons on this skill of giving the main idea, that materials be chosen which are really thought units and which have one definite and clearly expressed central idea. It is desirable to begin with paragraphs in which this main idea is expressed by a topic sentence, and gradually work up to more difficult paragraphs in which the main idea can best be expressed by phrases or other items found in the paragraph.)

10. Raise questions like: "Which paragraph gives the best information about? or "Which paragraph answers this question?"
11. See that children have material to read which is easy enough. Then insist upon complete mastery of the ideas in it. The mere pronunciation of the words is valueless.
12. Have children write topic sentences.
13. Have children answer thought-questions which require comprehension of paragraphs. (See items 16 and 18 in Elementary battery and items 1 and 39 in Advanced battery.)

// SUGGESTIONS FOR DEVELOPING ABILITY TO ORGANIZE IDEAS //

1. In the lower grades, children may choose all of the sentences which prove a point, or all of the words which describe an incident.
2. Pupils may be drilled on finding as many topics as possible under a given topic or all of the causes of a condition. For example, "What sentences show that cotton could not be raised profitably in Iowa?"
3. Exercises similar to those in the test may be used: "Which of the following questions are answered by this material?" "Which are the most important points to remember in this lesson?" "Which of a group of

10. Raise questions like: "Which group is given the best information about ...?" or "Which paragraph answers this question ...?"

11. See that children have material for each item in every section. Then finding upon completion of the items in 10. The more presentation of the words is valued.

12. Have children write topic sentences.

13. Have children answer thought-questions which require reorganization of information. (See items 10 and 11 in elementary battery and items 1 and 2 in advanced battery.)

QUESTIONS FOR DEVELOPING ABILITY TO ORGANIZE IDEAS

1. In the lower grades, children may choose all of the sentences which give a point, or all of the words which describe an incident.

2. Pupils may be asked to find out as many topics as possible under a given topic or all of the causes of a condition. For example, "What sentences show that action could not be taken quickly in 1905?"

3. Exercises should be given in the last way as well: "Which of the following questions is answered by this material?" "Which are the most important points to remember in this lesson?" "Which of a group of

subtopics belong under a given heading?" "What did they do first?"

4. Outlining lessons in other fields and gathering all the data possible on a topic in geography or science, are good methods of developing organization.

5. Because of the difficulty of constructing objective exercises in outlining, the test does not contain a great number of such situations. However, the course of study should contain definite and systematic provisions for teaching outlining. The order of exercises should probably be something as follows:

a) Give the main topic, require pupils to fill in the sub-headings. Indicate how many subheadings there are.

b) Same as a, but the number of subheadings not indicated.

c) Require pupils to outline a paragraph, giving subheadings, without guidance.

6. Other types of organization exercises:

a) "What facts would you use to show that etc. ...?" or "What facts would you use to prove that?" or "What facts would you use to decide whether etc."

b) "In the following list, check the facts which you would use to prove"

anthropics belong under a given heading? "What did they do first?"

4. Outlining lessons in other fields and gathering all the data possible on a topic in geography or science. are good methods of developing organization.

5. Because of the difficulty of constructing objective exercises in outlining, the test does not contain a great number of such situations. However, the nature of study should contain definite and systematic provisions for testing outlining. The order of exercises should probably be something as follows:
a) Give the main topic, require pupils to fill in the two columns. Indicate how many subheadings there are.

b) Same as a, but the number of subheadings not indicated.

c) Require pupils to outline a paragraph, giving subheadings, at their pleasure.

6. Other types of organization exercises:

a) "What facts would you use to show that . . . etc."

... or "What facts would you use to prove that

...?" or "What facts would you use to decide

whether . . . etc."

b) "In the following list, check the facts which

you would use to prove . . ."

c) Classifying facts under certain characteristics or common principles.

7. Have children organize questions or problems raised in class discussion under certain headings.

8. Have children place events in the time order of occurrence.

// SUGGESTIONS FOR DEVELOPING GRASP OF TOTAL MEANING //

This ability, of course, is closely related to the other reading skills, and much the same types of exercises may be used for remedial drill as in the cases of comprehension and organization. The following types of questions and exercises are useful:

1. "Select the best title from the following."
2. "What chief question is answered by this article?"
3. "What was the author's purpose in writing the article?"
4. "What is the one most important thing to remember from the article?"
5. "Which of the following is the best conclusion to draw from the article?"
6. "Which statement has been shown to be false by the article?"

6) Classifying facts under certain characteristics

or common principles.

7. Have children organize questions or problems raised

in class discussion under certain headings.

8. Have children place events in the time order of

occurrences.

SUGGESTIONS FOR DEVELOPING HABIT OF LOGIC REASONING

This ability, of course, is directly related to the other reading skills, and much the same types of exercises may be used for remedial drill as in the case of comprehension and organization. The following types of questions and exercises are useful:

1. "Select the best title from the following."
2. "What chief question is answered by this article?"
3. "What was the author's purpose in writing the article?"
4. "What is the one most important thing to remember from the article?"
5. "Which of the following is the best conclusion to draw from the article?"
6. "Which statement has been shown to be false by the article?"

7. Have children go through several articles or chapters and choose the one which is most completely apropos of the subject they are looking for.

Following the tabulation in a chart the evidences of deficiency, the diagnosis, remedial suggestions and the listing of suggestions for lessons to develop particular skills, the writer, as administrator, realized that if the remedial program was to be effective, the teacher must be provided with materials she could use.

Anyone who has attempted a remedial program knows that it is almost a physical impossibility for a teacher to provide daily material of the type as well as the amount needed in such a program.

The amount of practice given by the reading text and lessons prepared by the teacher was far from sufficient. No teacher can give the time required to the preparation of original lessons to develop the special skills. For this reason, the writer purchased for the use of each child in the room, books which contained lessons, each one of which stressed one or more skills.

The first book used was Diagnostic Tests and Remedial Exercises in Reading.¹ The book contained materials for

¹Bruekner, Leo J. and Lewis, William Dodge - Diagnostic Tests and Remedial Exercises in Reading, published by John C. Winston Company, 1935

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7. Have children to choose several articles on rheumatism and choose the one which is most completely correct of the subject they are learning.

Following the selection is a short discussion of rheumatism, the diagnosis, remedial measures and the line of investigation for factors in rheumatism. The writer, as a physician, would like to see the program was so effective, the teacher must be provided with materials and time.

Anyone who has attempted a remedial program knows that it is almost a hopeless responsibility for a teacher to provide daily material of this type as well as the money needed in such a program.

The amount of material given to be tested and lessons prepared by the teacher are far from sufficient. The teacher can give the time required for the preparation of original material to develop the child's ability. For this reason, the writer prepared for the use of each child in the room, books which contained lessons, each one of which stressed one or more skills.

The first book used was Diagnostic Tests and Remedial

Exercises in Reading. The book contained materials for

Interpretation, Sec. 1, and tests, which were - Diagnostic Tests and Remedial Exercises in Reading, published by John C. Winston Co., N.Y. 1932

for studying: (1) rate and quality of oral reading; (2) the characteristics of the pupil's eye movements; (3) his eye voice span; (4) his ability to pronounce selected words used frequently in reading; (5) specific phonetic difficulties.

The second step was to secure a text book at the level of each group in the grade. Two texts¹ which that particular group had never read were borrowed from another school. Although the group was listed as a fifth grade, the books borrowed were of a third and fourth grade level and were used in the class by the groups which were made up on the basis of the grade norms received in the test. The daily lessons did not always follow in the same sequence as they were in the book. If the teacher wished to have several stories of the same type on consecutive days, she chose them from the book regardless of their place in the text.

Following the use of the texts mentioned, the third book used was The Developmental Reader.² This book was a text and workbook combined. It contained exercises for Word Study

¹Gates, Huber, Ayer, Peardon - Wide Wings
published by The Macmillan Co.

¹Gates, Ayer - Let's Look Around, published by Macmillan Co.

²Shipley, A. H. - The Developmental Reader, Book I
published by Modern School Program 1936-1937

for studying: (1) form and content of oral reading; (2) the
 characteristics of the child's eye movements; (3) his eye
 voice; (4) his ability to pronounce selected words
 used frequently in reading; (5) special exercises in fluency
 and accuracy.

The second step was to secure a text book at the level
 of each group in the grade. Two copies, which that particu-
 lar group had never read were borrowed from the school.
 Although the group was listed as a fifth grade, the books
 borrowed were of a fourth and fourth grade level and were
 used in the class by the groups which were made up on the
 basis of the grade norms received in the test. The daily
 lessons did not always follow in the same sequence as they
 were in the book. If the teacher wished to have several
 recitations of the same type or consecutive days, she chose them
 from the book regardless of their place in the text.
 Following the use of the texts mentioned, the fifth
 book used was The Developmental Reader.² This book was a text
 and workbook combined. It contained materials for work groups

¹ Gates, Isabel, How to Read, Boston - Little Brown
 published by The Macmillan Co.

² Gates, Isabel, The Developmental Reader, published by Macmillan Co.

³ Gates, Isabel, The Developmental Reader, Book I
 published by Macmillan Co. 1930-1932

Comprehension-Details, Comprehension-Central Thought, Comprehension-General Significance, Following Directions, Organization-Construction, Organization-Content, Organization-Interpretation, Speed of Reading.

The teacher used the exercises just mentioned as a pattern for her lessons in the Social Studies. These exercises she duplicated for the class, using social study tests as references.

Exercises were taken from Grade Four Hectograph Workbook¹. These were used to give variety to lesson material.

¹Johnson, Eleanor M. and Kell, Jane - 3 in 1 Hectograph Workbook, Grade Four, published by the American Education Press, Inc., Columbus, Ohio

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Comprehension-Details, Comprehension-Concept, Comprehension-
Presentation-General, Presentation-Details, Presentation-
Presentation-Concept, Presentation-Concept, Presentation-
Interpretation, Speed of Learning.

The teacher used the exercises just mentioned as a
pattern for her lesson in the Social Studies. These exer-
cises are designed for the class, using social study cards
as references.

Exercises were taken from Grade Four History work-
book. These were used to give variety to lesson material.

Johnson, Eleanor M. and Bell, Jane - } in 1 History
Workbook, Grade Four, published by the American Education
Press, Inc., Columbia, Ohio

CHAPTER V

SUMMARY OF FINDINGS

Following the remedial program briefly explained in Chapter IV, the tests were administered in June to the same grades.

Table VI shows the errors in June on Skills A and B.

TABLE VI
June - Errors

Skill A	Items	Grade 5A 20 Pupils	Grade 5B 28 Pupils	*Grade 5C 24 Pupils
	3	4	7	8
To recognize	7	1	3	6
the main idea	9	7	14	10
or topic of	14	5	9	10
a paragraph	18	0	6	9
	21	5	7	7
	42	10	16	9
	49	3	5	5
Skill B				
	11	3	2	2
To grasp an	12	3	1	3
idea not	15	14	21	15
explicitly	16	10	19	11
stated in the	29	4	23	18
paragraph	52	6	7	7

*Remedial Group

CHAPTER V SUMMARY OF FINDINGS

Following the remedial program previously reported in Chapter IV, the tests were administered in June to the same Grades.

Table VI shows the errors in June on Skills A and B.

TABLE VI
June - Errors

Skill A	Items	Grade 8A 50 Pupils	Grade 8B 50 Pupils	Grade 8C 50 Pupils
	1	4	7	8
To recognize	2	1	1	6
the main idea	3	7	14	10
or topic of	14	2	9	10
a paragraph	15	0	6	3
	21	2	7	7
	22	10	16	9
	23	3	2	2
Skill B				
	11	3	6	2
To grasp an	12	3	1	3
idea not	13	16	21	13
explicitly	16	10	14	11
stated in the	24	4	23	18
paragraph	25	6	7	7

Remedial Group

Comparison of Tables I and VI shows a marked improvement in Skills A and B in the majority of items for Grade 5C which was the experimental group.

Table VII shows the errors in June on Skill C.

TABLE VII
June - Errors

Skill C	Item	Grade 5A 20 Pupils	Grade 5B 28 Pupils	*Grade 5C 24 Pupils
To recognize and understand implied To recognize and understand an explicitly stated fact	1	0	1	0
	2	1	3	7
	4	2	4	5
	8	0	1	1
	20	3	5	6
	22	3	5	2
	25	1	7	11
	26	2	0	9
	33	3	12	7
	36	7	12	6
	37	0	2	4
	46	4	7	5
	47	6	14	7
	57	7	14	8

*Experimental Group

Comparison of Tables II and VII shows an improvement in Skill C in all groups and especially in Grade 5C which was the experimental group.

Comparison of Tables I and VI shows a marked improvement in Bill 5 and 6 in the majority of items for which was the experimental group.

Table VII shows the scores in items on Bill 5.

TABLE VII
Items - Group

Bill 5	Item	Group 1A 20 Pupils	Group 2A 20 Pupils	Group 2B 20 Pupils
	1	0	1	0
	2	1	3	7
	4	1	2	2
To recognize	5	0	1	1
and understand	10	3	3	0
an explicitly	22	3	3	4
stated fact	23	1	7	11
	25	2	0	9
	26	3	12	3
	27	7	12	0
	28	0	5	4
	29	4	7	5
	30	0	14	7
	31	7	14	0

*Experimental group

Comparison of Table VII and VIII shows an improvement in Bill 5 in all items and especially in items 22 stated was the experimental group.

Table VIII shows the errors in Skill D in June

TABLE VIII
June - Errors

Skill D	Item	Grade 5A 20 Pupils	Grade 5B 28 Pupils	*Grade 5C 24 Pupils
To recognize and understand implied facts and relationships	5	3	10	8
	6	0	1	2
	13	0	1	4
	17	0	1	4
	19	4	4	8
	23	6	17	9
	24	10	14	13
	34	2	0	3
	35	5	7	6
	38	8	15	14
	39	6	4	9
	40	8	7	9
	42	10	16	9
	43	4	11	12
	45	2	7	5
	53	3	7	5
To recognize proper time sequence	54	6	10	11
	55	11	20	14
	58	4	8	10

*Remedial Group

Table VIII shows the errors in Skill D in 1900

TABLE VIII
Errors - 1900

Skill D	Item	Grade 2A No. correct	Grade 2B No. correct	Grade 2C No. correct
	1	2	3	10
	2	0	0	1
	3	13	0	1
To recognize	4	17	0	1
and understand	5	10	4	4
implied	6	23	6	17
facts and	7	24	10	14
relationships	8	34	2	0
	9	35	2	7
	10	38	6	12
	11	39	6	4
	12	40	8	7
	13	42	10	16
	14	43	4	11
	15	45	2	7
	16	50	3	7
	17	54	3	10
	18	62	11	20
	19	65	4	8

*Keweenaw Group

Comparison of Tables VIII and III shows that there was improvement in Skill D in all classes but the greatest improvement was in Grade 5C.

Table IX shows the errors in Skill E in June

TABLE IX
June - Errors

Skill E	Item	Grade 5A 20 Pupils	Grade 5B 28 Pupils	*Grade 5C 24 Pupils
To recognize common elements in incidents or paragraphs	50	4	8	14
	56	6	8	6
* Remedial Group				

Comparison of Tables IV and IX shows a very small gain in the skill in any group.

Table X shows the errors in Skill F in June

TABLE X
June - Errors

Skill E	Item	Grade 5A 20 Pupils	Grade 5B 28 Pupils	*Grade 5C 24 Pupils
To recognize proper time sequence	26	12	15	9
	44	5	22	5
	48	9	9	12
	31	7	21	3

*Remedial Group

Comparison of Tables V and X shows the greatest reduction in errors in Grade 5C, the experimental group.

Comparison of Tables VIII and IX shows that there was improvement in Skill 3 in all classes but the greatest improvement was in Grade 50.

Table IX shows the errors in Skill 3 in June

TABLE IX
June - Errors

Skill 3	Item	Grade 50 20 Pupils 20 Pupils	Grade 50 20 Pupils 20 Pupils	Grade 50 20 Pupils 20 Pupils
To recognize common elements in language or paraphrase	50	4	8	16
* Homophony group	50	4	8	8

Comparison of Tables IV and IX shows a very small gain in the skill in any group.

Table X shows the errors in Skill 4 in June

TABLE X
June - Errors

Skill 4	Item	Grade 50 20 Pupils 20 Pupils	Grade 50 20 Pupils 20 Pupils	Grade 50 20 Pupils 20 Pupils
To recognize proper class sentences	50	12	12	9
	44	2	22	3
	43	3	9	12
* Homophony group	31	3	21	3

Comparison of Tables V and X shows the greatest reduction in errors in Grade 50, the experimental group.

Tables XI, XII and XIII show the growth of the three grades tested in the skills measured by Part I of the Iowa Every-Pupil Tests of Basic Skills¹ which is concerned with reading comprehension and includes items testing paragraph comprehension, the ability to grasp and understand significant details, the organization of ideas and the ability to appreciate the total meaning of selections read.

TABLE XI
Grade 5A

Grade	Date	No.	Mean	S.D.	S.E. M	Diff. M	S.E. Diff.	Critical Ratio
5A	September	22	35.11	8.22	1.75	7.74	2.11	3.66
5A	June	20	42.85	5.88	1.19			

The mean score in June was 42.85 compared with a mean score in September at 35.11. The critical ratio being 3.66 showed this gain to be statistically significant.

TABLE XII
Grade 5B

Grade	Date	No.	Mean	S.D.	S.E. M	Diff. M	S.E. Diff.	Critical Ratio
5B	September	29	35.65	8.49	1.57	2.85	1.93	1.47
5B	June	28	38.5	6.51	1.13			

The mean score in June was 38.5 compared with a mean score in September at 35.65. The critical ratio being 1.45 showed that this gain was not statistically significant.

¹Published by Houghton Mifflin Company, Boston

Tables XI, XII and XIII show the growth of the three grades tested in the skills measured by Part I of the Iowa Twenty-Fifth Year of Basic Skills¹ which is measured with reading comprehension and, in addition, tests testing paragraph comprehension, the ability to grasp and understand slightly more details, the organization of ideas and the ability to appreciate the total meaning of selections read.

TABLE XI
Grade 5A

Grade	Date	No.	Mean	S.D.	S.E.	Diff.	S.E. Critical
5A	September 27	27	77.11	8.73	1.72	7.76	8.45
5A	June 26	26	72.85	8.88	1.19		7.88

The mean score in June was 72.85 compared with a mean score in September of 77.11. The critical ratio being 3.80 showed this gain to be statistically significant.

TABLE XII
Grade 5B

Grade	Date	No.	Mean	S.D.	S.E.	Diff.	S.E. Critical
5B	September 27	27	77.85	8.19	1.77	8.55	8.45
5B	June 26	26	76.7	8.51	1.11		7.88

The mean score in June was 76.7 compared with a mean score in September of 77.85. The critical ratio being 1.12 showed that this gain was not statistically significant.

¹Published by Houghton Mifflin Company, Boston.

TABLE XIII
Grade 5C

Grade	Date	No.	Mean	S.D.	S.E. M	Diff. M	S.E. Diff.	Critical Ratio
5C	September	24	25.76	6.33	1.29			
5C	June	23	38.98	7.5	1.56	13.22	2.03	6.54

The mean score in June was 38.98 compared with a mean score in September at 25.76. The critical ratio being 6.54 shows a gain that is statistically significant. This is the experimental group.

TABLE VIII
Grade 20

Grade	Date	No.	Mean	S.D.	Diff.	S.D.	Diff.
20	September 21	15	25.75	0.73	1.75		
20	June	23	25.75	0.2	1.75	1.75	0.73

The mean score in June was 25.75 compared with a mean score in September of 25.75. The difference is not significant. This shows a gain that is statistically significant. This is the experimental group.

Tables XIV, XV and XVI show growth of the three groups tested in the skills measured by Part II of the Iowa Every-Pupil Tests of Basic Skills.¹ Part II is concerned with word meaning and measures the scope of the pupil's reading vocabulary.

TABLE XIV
Grade 5A

Grade	Date	No.	Mean	S.D.	S.E. M	Diff. M	S.E. Diff.	Critical Ratio
5A	September	22	25.79	7.50	1.59	5.64	2.05	2.50
5A	June	20	31.4	5.82	1.30			

The mean score in June was 31.4 compared with a mean score of 25.79 in September. The critical ratio being 2.50 shows the gain is not statistically significant.

¹Published by Houghton Mifflin Company, Boston

Tables XIV, XV and XVI show growth of the three groups tested in the ability measured by Part II of the Iowa Tests. Pupil Tenor is a male British. Part II is concerned with word meaning and measures the range of the pupil's reading vocabulary.

TABLE XIV
Grade 5A

Grade	Date	No.	Mean	S.D.	S.E.	Diff.	S.E. (Critical)
					M	M	Diff. Ratio
5A	September 22	25	25.79	7.50	1.52	2.04	2.02
5A	June 29	25	11.4	4.82	1.30		2.90

The mean score in June was 11.4 compared with a mean score of 25.79 in September. The critical ratio being 2.90 shows the gain is not statistically significant.

TABLE XV
Grade 5B

Grade	Date	No.	Mean	S.D.	S.E. M	Diff. M	S.E. Diff.	Critical Ratio
5B	September	29	30.07	6.45	1.19		2.14	1.78
5B	June	28	33.88	5.73	1.08	3.81		

The mean score in June was 33.88 compared with a mean score of 30.07 in September. The critical ratio being 1.78 shows the gain is not statistically significant.

TABLE XVI
Grade 5C

Grade	Date	No.	Mean	S.D.	S.E. M	Diff. M	S.E. Diff.	Critical ratio
5C	September	24	23.50	7.80	1.59		1.99	1.77
5C	June	23	27.01	5.82	1.21	3.54		

The mean score in June was 27.01 compared with the mean score of 23.50 in September. The critical ratio being 1.77 the gain is not statistically significant.

In the remedial program there was no particular effort made to improve the particular points measured by Part II.

TABLE IV
Grade 36

Grade	Date	No.	Mean	S.D.	Diff.	U.S. Diff.	Original Ratio
36	September 25	25	30.07	0.45	1.19	0.14	1.75
36	June 25	25	23.88	0.79	1.08	1.61	

The mean score in June was 23.88 compared with a mean score of 30.07 in September. The original ratio being 1.75 shows the gain is not statistically significant.

TABLE V
Grade 35

Grade	Date	No.	Mean	S.D.	Diff.	U.S. Diff.	Original Ratio
35	September 24	24	27.30	0.80	1.39	1.49	1.77
35	June 23	23	27.01	0.85	1.51	1.52	

The mean score in June was 27.01 compared with the mean score of 27.30 in September. The original ratio being 1.77 the gain is not statistically significant.

In the remedial program there were no particular efforts made to improve the percentage of correct responses by June 23.

COMPARISONS
September - June

Table XVII shows a comparison of the September results of Part I of the test with the results obtained in June in Grades 5B and 5C

TABLE XVII
Grades 5B and 5C
Compared

Grade	Test	No.	Mean	S.D.	S.E. M	Diff. M	S.E. Diff.	Critical Ratio
5B	September	29	35.65	8.49	1.57	9.89	2.03	4.82
5C	September	24	25.76	6.33	1.29			
5B	June	29	38.50	6.51	1.13	.40	1.92	--
5C	June	23	38.98	7.50	1.56			

The mean score for 5B in September was 35.65 compared with 25.76 of 5C. The critical ratio of 4.82 showed this difference to be statistically significant in favor of 5B.

The mean score in June for 5B was 38.50 compared with 38.95 for 5C. 5C had planned remedial teaching during the year. There was no difference between the groups in June.

COMPARISON September - June

Table VIII shows a comparison of the September results of Part I of the test with the results obtained in June in Grades 25 and 26.

TABLE VIII
Grades 25 and 26
Comparison

Grade	Test	No. Items	S.D.	S.E.	Diff.	S.E. Diff.	Critical Value
25	September 25	12.50	2.49	1.57	2.50	1.03	4.85
26	September 26	12.75	0.51	1.39			
25	June	12.50	0.51	1.13	4.85	1.93	--
26	June	12.50	1.50	1.50			

The mean score for 25 in September was 12.50 compared with 12.50 in June. The standard error of a 25 showed this difference to be statistically significant in favor of 25. The mean score in June for 26 was 12.75 compared with 12.50 for 25. 26 had a standard error of 1.50. The difference between the scores in June.

Table XVIII shows a comparison of the September results of Part I of the test with the results obtained in June in Grades 5A and 5C.

TABLE XVIII
Grades 5A and 5C
Compared

Grade	Test	No.	Mean	S.D.	S.E. M	Diff. M	S.E. Diff.	Critical Ratio
5A	September	22	35.11	8.22	1.75	9.35	2.13	4.39
5C	September	24	25.76	6.33	1.29			
5A	June	22	42.85	5.58	1.19	3.87	1.99	1.94
5C	June	23	38.98	7.50	1.56			

The mean score for 5A in September was 35.11 compared with 25.76 for 5C. The critical ratio of 4.39 showed this difference to be statistically significant in favor of 5A.

The mean score for 5A in June was 42.85 compared with 38.98 for 5C. The critical ratio of 1.94 showed that the difference was not statistically significant. 5C had planned remedial work and there was no difference between the groups in June.

Table XVII shows a comparison of the September results of Part I of the test with the results obtained in June in Grades 2A and 2C.

TABLE XVII
Grades 2A and 2C
Comparison

Grade	Test	No.	Mean	S.D.	S.E.	Diff.	S.D.	Diff.	Original Ratio
				M		M			
2A	September	22	35.11	8.52	1.77	8.32	9.13	1.79	
2C	September	24	22.78	8.33	1.69				
2A	June	22	42.87	5.52	1.19	1.87	1.89	1.94	
2C	June	23	38.98	7.50	1.56				

The mean score for 2A in September was 35.11 compared with 22.78 for 2C. The critical value of 1.69 shows a significant difference to be statistically significant in favor of 2A. The mean score for 2A in June was 42.87 compared with 38.98 for 2C. The critical value of 1.94 shows that the difference was not statistically significant. 2C had obtained remedial work and there was a difference between the groups in June.

Table XIX shows a comparison of the September results of Part II of the test with the results obtained in June in Grades 5A and 5C.

TABLE XIX
Grades 5A and 5C
Compared

Grade	Test	No.	Mean	S.D.	S.E. M	Diff. M	S.E. Diff.	Critical Ratio
5A	September	22	25.79	7.50	1.59	2.29	2.27	1.00
5C	September	24	23.50	7.80	1.59			
5A	June	22	31.40	5.82	1.30	4.39	1.77	2.48
5C	June	23	27.01	5.82	1.21			

The mean score for 5A in September was 25.79 compared with the mean score of 23.50 for 5C. The critical ratio showed that this difference was not statistically significant.

The mean score for 5A in June was 31.40 and 27.01 for 5C. The critical ratio of 2.48 shows that the difference is not statistically significant.

The parallel work carried on was not concerned with the kinds of skills measured in Part II of this test. The scores of all groups remained in the same relative position.

Table III shows a comparison of the calculated results of Part II of the work with the results obtained in tests in Grades 2A and 2C.

TABLE III
Grades 2A and 2C
Comparison

Grade	Test	Max. Load	Max. Deflection	Max. Load	Max. Deflection
2A	September 15	25.75	4.35	2.35	2.35
2C	September 24	23.50	7.40	1.55	1.55
2A	June	21.40	2.65	1.30	4.35
2C	June	17.40	2.65	1.35	1.35

The mean value for the maximum load was 22.75 compared with the mean value of 21.50 for 2C. The difference shown that this difference was not statistically significant. The mean value for the deflection was 3.10 and 3.70 for 2C. The difference value of 0.60 shows that the difference is not statistically significant.

Table XX shows a comparison of the September results of Part II of the test with the results obtained in June in Grades 5B and 5C

TABLE XX
Grades 5B and 5C
Compared

Grade	Test	No.	Mean	S.D.	S.E. M	Diff. M	S.E. Diff.	Critical Ratio
5B	September	22	30.07	6.45	1.19	6.57	1.98	3.31
5C	September	24	23.50	7.80	1.59			
5B	June	22	33.88	5.73	1.08	6.87	1.58	4.34
5C	June	23	27.01	5.82	1.21			

The mean score for 5B in September was 30.07 compared with a mean score of 23.50. The critical ratio of 3.31 shows the difference to be statistically significant.

The mean score for 5B in June was 33.88 compared with a mean score of 27.01 for 5C in June. The critical ratio of 4.34 shows this difference to be statistically significant.

N.B. The remedial work carried on was not concerned with the kinds of skills measured in Part II of this test. The scores of all groups remained in the same relative position.

Table II shows a comparison of the experimental results of Part II of the test with the results obtained in Part I of the test.

TABLE II
Grades 25 and 50
Comparison

Grade	Test	No.	Mean	S.D.	S.E.	Diff.	S.D.	Diff.	Ratio
25	September 25	25	30.07	0.45	1.13	0.37	1.00	0.37	1.31
50	September 24	25	27.50	0.80	1.58				
25	June	25	33.88	0.73	1.03	0.87	1.50	0.87	1.34
50	June	25	27.01	0.82	1.41				

The mean score for 25 in September was 30.07 compared with a mean score of 27.50. The critical ratio of 1.31 shows the difference to be statistically significant.

The mean score for 50 in June was 27.50 compared with a mean score of 27.01 for 50 in June. The critical ratio of 1.34 shows this difference to be statistically significant.

B.B. The remedial work carried on was not concerned with the kind of skills learned in Part II of this test. The scores of all groups remained in the same relative position.

CHAPTER VI CONCLUSION

After studying the results of the June tests in the three fifth grades, the following conclusions were drawn:

1. Standard Test results are valuable when used by the teacher. If the teacher will analyze the results, she will know the weaknesses and strength of each pupil in each subject.
2. Teachers need supervision and guidance in the interpretation of results.
3. Scientifically planned material for remedial work should be placed in the hands of each teacher.

The majority of teachers are not skilled in planning remedial work.

The results furnished the beginning of a study of individual pupils over a period of time. (see profile sheet)

The results were particularly significant to the writer because they showed that there was little gain over a year when the teacher did not bear in mind a particular objective and plan her daily lessons to accomplish it. Children do not profit from taking tests. The real profit to the child comes through the remedial instruction given and, in turn, the remedial instruction is made possible only by discovering individual difficulties. The tests do not take the place of

CHAPTER VI
CONCLUSION

After studying the results of the tests in the three first studies, the following conclusions were drawn:

1. Standard Test results are valuable when used by

the teacher. If the teacher will analyze the results, she will know the weaknesses and strengths of each child in each subject.

2. Teachers need motivation and guidance in the interpretation of results.

3. Individually planned material for remedial work should be placed in the hands of each student.

The majority of teachers are not skilled in planning remedial work.

The results furnished the following as a basis of individual pupils over a period of time. (See graph in text.)

The results were very similar to the results in the previous study though there was little change over a year when the teacher did not want to find a remedial objective and plan her daily lessons to accomplish it. Children do not profit from being taught. The real profit is the child's progress through the remedial instruction given and, in turn, the remedial instruction is the possible only by discovering individual differences. The lesson on how to use the graph of

teaching but they do however, make teaching more definite and concrete by disclosing weaknesses to the removal of which teaching can be directed.

The tests also revealed that the so-called grading plan was inadequate and ineffective and that groups should be organized on the basis of where the child is, rather than on the basis of where he ought to be or where the teacher hopes he is because he has been in school ----- years.

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DIRECTIONS

FOR THE

GENERAL ADMINISTRATION

OF THE

IOWA EVERY PUPIL TESTS IN BASIC SKILLS SCHOOL

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APPENDIX

MATERIALS

APPENDIX

TABLES

DIRECTIONS

FOR THE

GENERAL ADMINISTRATION

OF THE

IOWA EVERY-PUPIL TESTS OF BASIC SKILLS—FORM L

Importance of Adherence to a Standard Procedure

One of the principal values of any standardized test is that the school using this test can make an objective comparison between the achievement of its own pupils and classes and results similarly obtained in other schools. The norms for Form L of the Iowa Every-Pupil Tests of Basic Skills were established in a standardization program involving over 40,000 pupils in more than 300 school systems. While most of these schools were located in Iowa and in neighboring Midwestern states, it is believed that these norms are as representative of the general level and spread of achievement in public schools throughout the country as any now available with other tests. In all of the schools participating in this standardization program, the tests were administered at the same time, under the same very carefully controlled conditions. The results obtained in any school using these tests may be validly compared with these norms only to the degree that the tests are administered under exactly the same conditions as those which prevailed in the standardization program. Great care has been taken, therefore, to describe in these pages (and in the manuals of directions for administering the separate tests) a specific and detailed standard procedure to be observed by all schools using these materials. Any deviation from this procedure will tend to invalidate the results obtained, since any apparent superiority or inferiority in the results may be due to the deviation in procedure rather than to a true superiority or inferiority in pupil achievement. Each school, therefore, should observe as *rigidly* as possible the directions given herein and in the "Directions for Administering" and the "Directions for Scoring" for the individual tests.

Each teacher who is to aid in the administration of any test should be given an opportunity beforehand to become well acquainted with the test and with the "Directions for Administering." If possible, a group conference should be held with the teachers before the testing period to make sure that all directions are fully understood and that each teacher appreciates the importance of absolute uniformity in the administration and scoring procedures.

The fact that special norms of *school* achievement (based upon school averages rather than upon individual pupil scores) are provided with these tests makes it important that full attendance be secured when the tests are given. Valid measures of school or class achievement can be obtained only through the testing of *every* pupil. This every-pupil requirement was rigidly enforced in the standardization program; hence, only in schools observing this requirement will the average results obtained be strictly comparable to the norms of school achievement.

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Schedule of Testing

The tests may, of course, be administered in whatever order and at whatever time seem most feasible. However, if the results are to be highly comparable with the norms provided, it is very important that the following conditions be observed.

1. All pupils in the same building should take the *same* test at the *same* time. To administer the same test to different groups during different periods would almost certainly result in discussions about the tests between pupils that would to some extent invalidate the results for the pupils tested in the later periods.
2. Each of the tests in the battery may be given in a single unbroken period, or in two shorter periods, in the amounts of time indicated in the "Directions for Administering" provided with each test. *The time limits for these tests must not be changed*, since results will be comparable to the norms only if directions for timing are rigidly observed.
3. Whether or not the tests are given in a single unbroken period or in two shorter periods, an adequate recess should be allowed after each test before the administration of the next.

The most satisfactory procedure for administering the tests is to set aside two half-day sessions for this purpose, substituting a special testing schedule for the regular class schedule during these sessions. The two half-day sessions should preferably come on different days; to administer the entire battery in a single day may tire the pupils unduly. For schools adopting this plan, the following time schedule is recommended.

	Grades 3-5, Elementary Battery		Grades 6-8, Advanced Battery	
First Day, P.M.	1:00- 1:50	Test A (Reading)	1:00- 2:25	Test A (Reading)
	1:50- 2:05	Recess	2:25- 2:40	Recess
	2:05- 3:00	Test B (Work-Study)	2:40- 4:00	Test D (Arithmetic)
Second Day, A.M.	9:00-10:00	Test C (Language)	9:00-10:30	Test B (Work-Study)
	10:00-10:15	Recess	10:30-10:45	Recess
	10:15-11:15	Test D (Arithmetic)	10:45-11:55	Test C (Language)

If it is desired to administer the tests in the regular class periods, without disturbing the established schedule of classes, each test may be administered in two short periods. There are innumerable ways of scheduling the tests under this plan, the simplest being to administer the first half of each test during certain class periods on one day, and then to complete each test during the same period the following day. For a school which divides its half-day sessions into four 45-50 minute periods, a schedule similar to the following could be established.

				Total Administration Time (minutes)	
				Elementary	Advanced
First Day, A.M. or P.M.	First Period:	First half of Test A		30	45
	Second "	" " " Test B		30	45
	Third "	" " " Test C		30	35
	Fourth "	" " " Test D		35	40
Second Day, A.M. or P.M.	First Period:	Second half of Test A		30	45
	Second "	" " " Test B		30	45
	Third "	" " " Test C		35	35
	Fourth "	" " " Test D		30	40

It may be desirable to combine some grade groups into a single group for the purpose of administering a test. In very small schools, it may be possible to test all pupils from grades six to eight in one group, and all pupils from grades three to five in another. In every case, however, care should be taken to avoid any unnecessary crowding of the pupils during the testing period and to insure that each pupil has reasonable writing space.

Scoring the Tests

A special effort has been made by the test authors to minimize as much as possible the burden of scoring these tests. How efficiently the scoring process will be conducted, however, must depend in large part upon the care with which the local superintendent or principal *organizes* the scoring routine. Any time spent in advance in working out the details of an efficient organization is certain to be repaid many times in later saving of time and increased accuracy. In general, the principle of specialization or division of labor should be followed as far as possible, in order to take full advantage of the increased skill and accuracy which come with continued practice in the same operation. In general, it is recommended that the following type of organization be followed within each building.

1. For each grade individually, separate the test booklets (or answer sheets) into four piles, one of Test A, one of Test B, etc. Within each of these piles, arrange the papers in alphabetical order according to last names of pupils. Make a careful independent check of each pile to make sure that the alphabetical order is correct in each.
2. Collect all copies of the Elementary Test A into a single pile, with the third grade papers on top, the fourth grade next, etc. Do likewise for the remaining Elementary tests, and for the answer sheets for the four Advanced tests. In a complete program, you will thus have eight piles of tests.
3. If eight scorers are available, make each responsible for one pile; if less than eight scorers are available, divide the piles among them, noting that Tests C and D require more time than Tests A and B. If more than eight scorers are available, divide them into eight *sets* of scorers, one for each pile, and make each scorer in each set responsible for only *certain of the steps* in scoring a single test. (See the suggestions at the end of the "Directions for Scoring" for the individual tests.) Any scorers who finish early may, of course, be assigned to help complete the scoring of one of the other piles.
4. Direct each scorer to follow exactly the "Directions for Scoring" provided for the test concerned. These directions have been developed on the basis of very extensive experience in scoring tests, and of a careful analysis of the motions involved. The directions are given in high detail in order that the schools may profit to the full from this experience.
5. In each of Elementary Tests B, C, and D, provide for an independent check on the transcription of part scores to the title-page and the addition of part scores. It is in these operations that some of the most serious errors are usually made.

Reporting the Results to the Central Office

In most school systems it will be desirable to report the test results to the central office for statistical analysis and general interpretation. Special report forms for this purpose have been provided with the tests. Usually it will be desirable to prepare a separate report for each grade tested in each building separately.

The task of transcribing the scores from the tests or answer sheets to these record forms can best be performed by two persons working together or by sets of two each, one person reading the names and scores from the tests, the other copying or typing these on the report form as they are read.

If the "Directions for Scoring" have been followed exactly, the tests in each of the eight piles will be found in their original order (alphabetized within grades). If the four piles of booklets for the Elementary Battery (or of answer sheets for the Advanced Battery) are then placed in a row (with Test A to the left) before the person who is to read the scores, the top paper on each pile should be for the same pupil. This pupil's name, sex, age, and scores may then be read to the copyist directly from the top papers. Immediately after these data have been copied, they should be *read back* by the copyist to the reader, who should check them carefully against the originals. The top paper may then be removed from each of the piles, and placed face down on the table. The data for the second pupil may then be read and checked from the tops of the piles in the same fashion, and so on for the remaining pupils.

The reader should check carefully each time, before reading any scores, to make sure that the *same* pupil's name does appear on all four top papers. Sometimes a pupil may not have taken all four of the tests, or the original alphabetical order may have been disturbed.

Statistical Analysis of Results

Most schools using these tests will find it desirable to establish *local* norms of achievement to supplement the general norms provided with the tests. The statistical analysis involved should include (as a minimum) the following steps.

1. Preparation of a frequency distribution of scores (on each subtest) for all pupils tested in each grade separately, and computation of mean and percentiles or deciles for each distribution.
2. Computation of mean score (on each subtest) for pupils in each grade and each building separately (for comparison with the norms of school achievement and for building comparisons within the system).
3. Plotting of mean scores on a pupil profile chart ("Individual Cumulative Record Form") for each grade in each building separately (see 2 above) in order to portray graphically the areas of high and low achievement in each building and in order to facilitate building comparisons.
4. Plotting of mean scores for each grade separately for the system as a whole (see 1 above).

Plotting Profiles for Individual Pupils

Much of the potential value of a testing program of this kind will be lost if the results for individual pupils are not graphically portrayed on the "Individual Cumulative Record Form" available with the tests. These profiles will greatly facilitate the interpretation of results for individual pupils, and are almost indispensable if the test results are to be used to full advantage in educational guidance.

IOWA EVERY-PUPIL TESTS OF BASIC SKILLS

DIRECTIONS FOR ADMINISTERING

TEST A: SILENT READING COMPREHENSION

ELEMENTARY BATTERY — GRADES 3, 4, AND 5

FORM L

GENERAL DIRECTIONS

-) Make yourself thoroughly familiar with the test and with the detailed directions for it before attempting to administer it. You should go through each step of the directions beforehand, reading aloud those parts that are to be read to the pupils, in order that the directions may be read without hesitation and with proper emphasis.
-) **Physical conditions:** The room in which the tests are to be administered should be quiet, and arrangements should be made so that there will be no interruptions or distractions. Preferably, only the pupils and the person (or persons) giving the test should be present.
-) **Seating:** Pupils should be separated as much as the seating arrangement of the room allows. A seating arrangement making it difficult to copy is better than warning against copying. Where the tests are to be given to large groups, there should always be one proctor for every thirty pupils.
-) **Preparation:** Desks should be cleared of all other materials. The pupils should be told in advance to bring to class two pencils. *Soft*, blunt pencils are preferable. The examiner should also have a few on hand.
-) **Keeping time:** It is especially important with short testing periods that time be kept accurately. A watch with a second hand will do for this purpose; a stop watch is even better. If you are using an ordinary watch, make a *written* note of the exact time at which you start each subtest.
-) After the test has begun, walk quietly about the room, seeing that pupils:
 - a) are indicating answers by the proper method;
 - b) are working on the right part of the test;
 - c) are not dawdling or wasting time on items that are too difficult for them;
 - d) are not delayed by pencils breaking, etc.

Give no help other than showing pupils the proper procedure.

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DIRECTIONS FOR GIVING THE TEST OF SILENT READING COMPREHENSION

(TEST A) FOR GRADES 3, 4, AND 5

This test may be administered in a single long period of approximately 50 minutes or in two shorter periods of about 25 minutes each. The actual working time on the complete test is 44 minutes. The remaining time will be used for distributing papers, reading directions, etc. It is recommended that the test be given in a single period with only a brief intermission to permit the children to relax.

Directions for administering the test in a single period are given below. Directions for administration in two periods are given on page 4. The detailed directions given herein should be followed exactly.

(1) To administer the test, begin by saying,

"Today we are going to take a test in reading. I shall now pass out the test booklets. Place them on your desks with the title page up and wait until I give further directions."

(2) When the booklets have been distributed, say,

*"Now write your last name in the blank space after the word **name**. Put it just above the words **last name**. Then write your first name above the words **first name**. After the word **sex** put **boy** or **girl**. After **grade** put [give 3, 4, or 5; or 3A, 3B, etc.]. After the words **age on last birthday** put your age at your last birthday. After **number of months since last birthday** put the number of months that have passed since your last birthday. After **school** write [give name, including spelling]. After **city** put [give name]. After **teacher** put [give name, including spelling]. After **date** put [give date]."*

(It may facilitate matters if such things as name of school, teacher, date, etc., are written on the board before beginning the administration of the test.)

Part I. 34 min.

(3) Then say,

*"Now look at the directions below the blanks. Read them silently while I read them aloud. They say: In this test there are selections for you to read. After each selection there are questions. Four answers are given for each question, but only one of these answers is right. You are to choose the one answer that you think is better than the others. Place an **X** in the box in front of this best answer. You may look back at the selection as often as you wish."*

*"Now read the sample and then look at question 1 below it. [Pause while children do this.] What is the correct answer to the question? [Pause for answer.] Yes, **black** is the right answer; so you should put an **X** in the box in front of the word **black**. Do so now. [Pause.]*

*"Now look at question 2. In which box are you going to put the **X**? [Pause for reply.] Yes, the last box, or in front of the words **a wagon**. Put the **X** there now. [Pause.]*

*"You are to answer all the other questions in the same way. First read the selection quickly, and then start answering the questions. Remember that you may look back at the selection; so do not spend too much time reading it the first time. Put an **X** in only one box for each question. Does everybody understand what you are to do?"*

Answer any reasonable questions. (If the explanation concerns only a few children, let the others begin and then help those children.) Then say,

"Now open your test booklet to page 2. [Pause.] You will have 22 minutes to answer the questions on pages 2, 3, 4, and 5. Do not stop when you finish the first two pages. Ready, go."

Observe the time carefully and write it down. Then help those students who have not understood the directions.

- (4) At the end of 13 minutes, say,

"If you have not already finished the questions on the first two pages, leave them now and turn to page 4. Do the exercises on page 4 and then go on to page 5, but do not turn to page 6."

(If test is to be given in two periods, continue from this point with the alternate directions on page 4.)

- (5) At the end of 9 more minutes (exactly 22 minutes after the start of the test), say,

"Stop. Close your test booklet and lay it on your desk with the title page up. We are going to rest a while before finishing the test."

This rest period may vary from 2 to 10 minutes according to the judgment of the examiner.

- (6) After the rest period, say,

"Now let us finish the test. Open your booklet to pages 6 and 7. [Pause.] You are to read the article on page 6 very quickly and then answer the questions on page 7. Remember you may look back at the article as often as you please; so do not spend too much time reading it the first time. You will have 12 minutes to do this part. You are not at any time to look at the parts of the test that you have already taken. Ready, go."

Observe the time carefully and write it down. Then walk among the pupils to see that they are following directions.

Part II. 10 min.

- (7) At the end of exactly 12 minutes, say,

"Stop. Turn to page 8. [Pause.] This is a vocabulary test. Read the directions silently while I read them aloud. They say: In each exercise, decide which one of the four words in heavy type has most nearly the same meaning as the word above them in light, or italic, type. Then place an X in the box in front of the word that you choose. The sample is marked correctly. Look at it. [Pause.] You will have 10 minutes to do this part of the test. Ready, go."

- (8) At the end of 10 minutes, say,

"Stop. Turn your booklets over and wait until they are collected."

Collect all the materials.

DIRECTIONS FOR GIVING ELEMENTARY TEST A IN TWO PERIODS

If the test is being given in two short periods, follow the preceding directions through step 4, and then continue with steps 5 to 8 given below.

- (5) At the end of 9 more minutes (exactly 22 minutes after the start of the test), say,

"Stop. Close your test booklet and lay it on your desk with the title page up. [Pause.] We will finish this test ——— [say when]. At that time be sure to take the same seat you now have. Wait quietly until the papers have been collected."

Collect the papers systematically, so that they may be distributed in the same order to the proper pupils during the second period. Make sure that all tests have been collected.

- (6) At the beginning of the next period, make sure that each pupil receives his own test booklet. When all pupils are ready to proceed, say,

"Now we are going to finish the reading test that we began ———. During this period you are not at any time to look at the questions that you answered during the first period. Open your booklet now to pages 6 and 7. [Pause.] You are to read the article on page 6 very quickly and then answer the questions on page 7. Remember you may look back at the article as often as you please; so do not spend too much time reading it the first time. You will have 12 minutes to do this part of the test. Ready, go."

Observe the time carefully and write it down. Then walk among the pupils to see that they are following directions.

Part II. 10 min.

- (7) At the end of exactly 12 minutes, say,

"Stop. Turn to page 8. [Pause.] This is a vocabulary test. Read the directions silently while I read them aloud. They say: In each exercise, decide which one of the four words in heavy type has most nearly the same meaning as the word above them in light, or italic, type. Then place an X in the box in front of the word that you choose. The sample is marked correctly. Look at it. [Pause.] You will have 10 minutes to do this part of the test. Ready, go."

- (8) At the end of 10 minutes, say,

"Stop. Turn your booklets over and wait until they are collected."

Collect all the materials.

IOWA EVERY-PUPIL TESTS OF BASIC SKILLS

ELEMENTARY BATTERY — GRADES 3, 4, AND 5

FORM L

By H. F. SPITZER

IN COLLABORATION WITH

ERNEST HORN, MAUDE MCBROOM, H. A. GREENE

AND E. F. LINDQUIST (*General Editor*)

all of the College of Education, State University of Iowa,
with the Assistance of the Faculty of the University Experimental Schools

TEST A: SILENT READING COMPREHENSION

Do not turn this page until you are told to do so. Your teacher will tell you what to do.

NAME _____ SEX _____
(LAST NAME) (FIRST NAME) (BOY OR GIRL)

GRADE _____ AGE ON LAST BIRTHDAY _____ NUMBER OF MONTHS SINCE LAST BIRTHDAY _____
(YEARS)

SCHOOL _____ CITY _____

TEACHER _____ DATE _____

Directions: In this test there are selections for you to read. After each selection there are questions. Four answers are given for each question, but only one of these answers is right. You are to choose the *one* answer that you think is better than the others. Place an **X** in the box in *front* of this best answer. You may look back at the selection as often as you wish.

Sample: Toby is a big black horse. He pulls the milk wagon about the town.

SCORES	
Part I: Reading Comprehension	(Poss. Score=58) _____
Part II: Vocabulary	(Poss. Score=40) _____

1. What color is Toby?

☐

Gray

☐

Black

☐

White

☐

Red

2. What does Toby pull?

☐

A plow

☐

A town

☐

A sled

☐

A wagon

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Tom is a little boy. He lives in the big city. He once lived in the country with his grandmother. James is another little boy. He lives in a small town. Both boys are in the first grade. In James' room at school there is a boy named Jack.

1. In what grade is James?

- ☐ First
☐ Second
☐ Third
☐ Fourth

2. How many boys are named in this paragraph?

- ☐ One
☐ Two
☐ Three
☐ Four

3. What does the paragraph tell?

- ☐ How the little boys lived in the big city
☐ Why Tom went to live with his grandmother
☐ How Tom and James played together
☐ Where some small boys live and go to school

4. Where does Tom live?

- ☐ In a small town
☐ In a large city
☐ In the country
☐ With his grandmother

5. Where does Jack live?

- ☐ In a little town
☐ In a big city
☐ In the country
☐ With his grandmother

On one of the islands where Columbus landed, he came to the home of a friendly Indian king. Columbus gave the king a cloth shirt and a pair of gloves. The king gave Columbus some gold and some food.

6. Where did the king live?

- ☐ In a castle
☐ On a high mountain
☐ On an island
☐ In India

7. What is a good title for this paragraph?

- ☐ "The Strange Island"
☐ "Columbus"
☐ "Shirt and Gloves"
☐ "Columbus and the Indian King"

8. What did Columbus give the king?

- ☐ Some gold
☐ Some clothing
☐ Food
☐ A friendly Indian

9. What is the *main* thing that this paragraph tells?

- ☐ Columbus and an Indian tried to be friends
☐ The Indian was afraid of Columbus
☐ Columbus landed on an island where there were Indians
☐ Columbus was starving, and the Indian fed him

10. How did the Indian act toward Columbus?

- ☐ He paid no attention to Columbus
☐ He treated Columbus well
☐ He fought Columbus
☐ He was afraid of Columbus

The flood waters were coming into the village streets. All the people were busy taking food and other things out of cellars. They carried most of the food into the attics.

11. Why was food taken out of the cellars?

- ☐ The people were hungry
- ☐ The water would spoil the food
- ☐ The people were moving out of the village
- ☐ The food was needed to feed the tired men

12. Why was most of the food taken into the attics?

- ☐ The attics were cooler than the cellars
- ☐ The attics were larger than the cellars
- ☐ The attics were highest from the ground
- ☐ The cellars were full of ammunition

13. Why were the people busy?

- ☐ They always worked that way
- ☐ They wanted to see how much food they had
- ☐ They knew that a flood was coming
- ☐ They were preparing food for winter

The young soldiers were running a race. One of them was running in his stocking feet. The toes and heels of his gray stockings were white. As this soldier ran away from them, the other runners saw the white heels. They called him "Silver Heels."

14. What were the soldiers doing?

- ☐ Marching ☐ Drilling
- ☐ Playing ☐ Fighting

15. Why didn't they call the man "Silver Toes"?

- ☐ Because only the stocking heels were white
- ☐ Because they could not see his toes when he ran
- ☐ Because the toes were white, not silver
- ☐ Because the man had silver heeled boots

(Go to top of next column for two more questions about the soldiers.)

16. Why did the soldiers see the man's heels so well?

- ☐ The man ran faster than they did
- ☐ The man stood with his back to them
- ☐ The man stood on his toes
- ☐ The man held up the back of his feet

17. Which color did these soldiers think looked like silver?

- ☐ Gray ☐ Metallic
- ☐ Ashy ☐ White

On rivers that are not very deep, boats with wide, flat bottoms are used. They are called flatboats. Because these boats do not sink very far into the water, they do not get stuck in the mud.

18. What does this paragraph tell?

- ☐ It tells about a certain kind of boat
- ☐ It tells why rivers are not deep
- ☐ It tells why there is mud in the rivers
- ☐ It tells how to make a boat with a flat bottom

19. How do you suppose flatboats got their name?

- ☐ From sailing on flat streams
- ☐ From the shape of the boat's bottom
- ☐ From the rivers in which they are used
- ☐ From the flat tops of the boats

20. On what kind of rivers are flatboats used?

- ☐ Very deep rivers
- ☐ Swift-flowing rivers
- ☐ Shallow rivers
- ☐ Wide rivers

21. Which of these does the paragraph tell?

- ☐ How large flatboats are
- ☐ How boats get stuck in the mud
- ☐ How flatboats got their name
- ☐ How deep the rivers are

(Go on to the next page.)

Score

PART

1

The boys were looking for elm trees. They wanted to make chewing gum as pioneer boys had done.

One of the boys said, "I see an elm tree."

"Is it a slippery elm?" asked one of the others.

"I think so," was the answer.

"I see some more elm trees," cried another boy.

PART

2

With their knives the boys cut through the outside bark of the trees.

"This one is no good. It must be a white elm," said one boy. He was feeling the inner bark to see whether it was slippery.

"Mine is a red elm. It's slippery," cried another boy.

The other three boys came to this tree and cut away some more of the outside bark. Then they scraped loose the thin, slippery, yellow skin or inner bark next to the wood of the tree.

PART

3

They put some of this inner bark in their mouths and chewed it. After a while the bark changed to a kind of chewing gum. It was not sweet, but the boys liked to chew it.

22. In Part 1, what are the boys doing?

- ☐ Cutting bark from trees
☐ Chewing gum which they had made
☐ Hunting for a certain kind of tree
☐ Climbing slippery trees

23. How did the boy who found the white elm know that his tree was no good?

- ☐ Because the inner bark was white
☐ Because the outer bark was too rough
☐ Because the inner bark was not slippery
☐ Because the inner bark was not red

24. How many different kinds of elm trees are mentioned in this story?

- ☐ One ☐ Two ☐ Three ☐ Four

25. What color was the inner bark?

- ☐ Red ☐ White ☐ Brown ☐ Yellow

26. What is the first thing the boys did after they came to the right tree?

- ☐ Scraped the inner bark loose
☐ Took away more of the bark on the outside
☐ Began to chew the inner bark
☐ Began to feel the inner bark

27. What is a good title for this story?

- ☐ "Why Elm Trees Are Slippery"
☐ "How Gum Can Be Made from Elm Trees"
☐ "How the Red Elm Differs from Other Elms"
☐ "Why Some Trees Are Hard to Climb"

28. What part of the bark did the boys chew?

- ☐ The inner part ☐ All of it
☐ The outer part ☐ The middle part

29. What is the difference between a red elm and a slippery elm?

- ☐ There is no difference
☐ The color is different
☐ One has a smooth bark; the other is rough
☐ Chewing gum can be made from only one of them

30. What have you learned from this story?

- ☐ All elm trees have slippery bark
☐ Pioneers made their cabins of slippery elms
☐ If you want gum, hunt for an elm which is not slippery
☐ A kind of chewing gum can be made from red elm

31. In an outline of Part 2, "Finding the right tree" is a topic. Which of these could be other topics in such an outline?

- ☐ "Cutting away the outer bark" and "Getting the inner bark"
☐ "Knives" and "The thin inner bark"
☐ "Finding elm trees" and "Chewing the bark"
☐ "The boys and their knives" and "The elm trees"

32. What must be done to the bark before it becomes chewing gum?

- ☐ It must be sweetened
☐ It must be colored
☐ It must be chewed
☐ It must be mixed with wax

(Go on to the next page.)

PART
1

Birds of the sea must come to land to raise their young. Many of the smaller sea birds build their nests in holes and in cracks between the rocks. In this way they protect their young from being eaten by certain large birds, such as gulls.

PART
2

The puffin, or sea parrot, uses a rabbit hole for its hiding place. At the bottom of the rabbit burrow, the single chick of the puffin lives until it is grown. The parents feed it fish. Like all young birds, the chick becomes very fat. When its feathers are almost grown, the parents leave the chick and never return.

PART
3

During several days of starving, the young puffin loses the extra fat. At night it comes out of the hole and finds its way down to the sea. By morning it has learned how to use its wings, and because it is now very light in weight, it can fly away from its enemies.

33. What reason is given in this article to explain why sea birds come to the land?

- ☐ To rest ☐ To nest
☐ To feed ☐ To escape from their enemies

34. Why do some sea birds make their homes in cracks between rocks?

- ☐ Because the sun does not shine there
☐ Because snakes cannot get into the cracks
☐ Because the wind cannot disturb the nest
☐ Because the cracks are too small for larger birds to enter

35. How many eggs does the puffin lay?

- ☐ One ☐ Three
☐ Two ☐ Four

36. How does the puffin prepare its nest?

- ☐ It digs a hole like a rabbit burrow
☐ It uses the hole dug by a rabbit
☐ It uses a crack in the rocks
☐ It gathers rocks and sticks

37. What is the chief food of the baby puffin?

- ☐ Seeds of sea weeds
☐ Worms and insects
☐ Fish
☐ Sea shells, moss, and scraps of bread

38. When do puffins stop feeding the chick?

- ☐ A few days before it learns to fly
☐ When it is fully grown
☐ After it has learned to fly
☐ When it is about three months old

39. Why doesn't the young puffin come out during the day?

- ☐ The sunlight is so bright that it cannot see
☐ Puffins are night birds and are never seen in daylight
☐ The parents will not let the young come out in daylight
☐ The enemies of the puffin could easily catch the young bird before it reached the water

40. What is the effect upon the young puffin of the days of starving?

- ☐ It makes him too weak to fly
☐ It makes him more dependent on his parents
☐ It makes him light enough to fly
☐ It makes him small enough to get out of the hole

41. Which of these is the best name for this article?

- ☐ "The Enemies of Sea Birds"
☐ "The Puffin and Its Young"
☐ "The Rabbits and the Young Puffin"
☐ "The Nesting Places of Sea Birds"

42. What is told in Part 2?

- ☐ The reason why sea birds come to land
☐ How the parent puffins raise their young
☐ How the rabbits help and how long the puffins feed their young
☐ How the puffins teach their young to fly

43. How long does it take the young puffin to learn to fly?

- ☐ About a week
☐ Two or three days
☐ A few minutes
☐ One night

(Do not turn this page until you are told to do so.)

Score

PART
1

It had been exactly three weeks since the eggs had been put under the setting hen in the first grade room. On this morning almost every child asked this question, "Have the eggs hatched?" The children did not wait for an answer but ran to look at the cage where the hen was sitting. They could not see any baby chicks, but they knew that some of the eggs had hatched, for three or four eggshells were lying about the nest.

PART
2

"May we move the hen from the nest?" asked the children.

"Not until everybody is here," said the teacher.

While the children were waiting, a little yellow chick crept out from under the hen's feathers. The children were very much excited when they saw the chick.

PART
3

When all the children were in the room, the teacher put her hand under the hen's breast and raised her up. The teacher did not take the hen off the nest. There were six chicks, and the shells of three more eggs were pipped. Two of the little chicks were still wet. They had just hatched. The others were already dry, and the down on their bodies was soft and fluffy. The teacher let the children look closely at one of the eggs that was just pipped. Only the beak of the baby chick could be seen. The shells of five eggs were still unbroken.

PART
4

The teacher took the old eggshells out of the nest before she let the hen sit on the eggs again.

"Why are you taking away the shells?" asked one child.

"Because an empty shell will sometimes slip over the end of an egg, and the baby chick is not strong enough to break through two shells," was the teacher's answer.

PART
5

During the day some of the older chicks kept moving about the nest. The hen probably thought these chicks needed something to eat. Saying, "Cluck cluck," the hen started to walk away from the nest.

"The hen must not leave the nest now. If she does, the other eggs won't hatch," said the teacher. "We shall have to take the chicks away from the nest during the daytime."

PART
6

Some paper was placed in the bottom of a box, and the chicks put into the box. The box was then covered with a cloth and placed near a radiator as far as possible from the hen.

"Before I go home tonight," said the teacher, "I shall put the chicks back under the hen. The hen will not leave the nest then."

44. Which of the following did most of the children do first?
- ☐ They went to the cage
 - ☐ They asked a question
 - ☐ They looked under the hen
 - ☐ They counted the chicks
45. Why did the children want to move the hen from the nest?
- ☐ To keep the hen from stepping on the chicks
 - ☐ So that they could take the eggshells from the nest
 - ☐ So that they could see the chicks
 - ☐ So that they could clean the cage
46. When they first went to the cage, how did the children know that some chicks had hatched?
- ☐ They saw a chick
 - ☐ They heard chicks peeping
 - ☐ They saw empty shells
 - ☐ The teacher told them
47. How many chicks were already dry when the children saw them?
- | | |
|--------------------------------|-------------------------------|
| <input type="checkbox"/> Three | <input type="checkbox"/> Five |
| <input type="checkbox"/> Four | <input type="checkbox"/> Six |
48. Which of the following things was done first?
- ☐ Raising the hen from the nest
 - ☐ Putting the chicks in a box
 - ☐ Taking the eggshells out of the nest
 - ☐ Fixing a box for the little chicks
49. What is the most important thing told in Part 4?
- ☐ Why the eggshells should be taken from the nest
 - ☐ That one child asked a question
 - ☐ How weak baby chicks are
 - ☐ That the teacher let the hen sit on the eggs again
50. Which parts of the story tell what was done when the hen was lifted up?
- | | |
|--|--|
| <input type="checkbox"/> Parts 1 and 2 | <input type="checkbox"/> Parts 3 and 4 |
| <input type="checkbox"/> Parts 2 and 3 | <input type="checkbox"/> Parts 4 and 5 |
51. What is a good title for this story?
- ☐ "The Cage in the First Grade Room"
 - ☐ "Baby Chicks Hatch in the First Grade Room"
 - ☐ "Pets in the First Grade Room"
 - ☐ "Baby Chicks Are Fed by the First Grade"

52. This story tells that the chicks should be removed from the nest. What other important thing does the story tell?
- ☐ The chicks were soft and fluffy
 - ☐ The hen should be kept in a cage
 - ☐ Chicks should be kept in a box
 - ☐ Eggshells should be taken from the nest
53. What best explains why the hen started to leave the nest?
- ☐ All the eggs had hatched
 - ☐ The children frightened her
 - ☐ She wanted to teach her babies to walk
 - ☐ She wanted to find food for the chicks
54. Why were the chicks taken from the nest?
- ☐ To keep them warm
 - ☐ To give them something to eat
 - ☐ To keep them from getting lost
 - ☐ To keep the hen on the nest
55. Why was the box with the chicks placed so far from the hen?
- ☐ To keep the chicks warm
 - ☐ To keep the hen from hearing the chicks
 - ☐ To get the chicks to a dark corner
 - ☐ To keep the chicks from seeing the hen
56. Which things were done when the hen was lifted up?
- ☐ The chicks and eggs were looked at, and the shells were taken away
 - ☐ The chicks were taken away, and the eggs were turned
 - ☐ The chicks were placed in a box, and the box was placed near a radiator
 - ☐ The chicks were put under the hen, and the questions were asked
57. When was the first chick seen?
- ☐ When the children entered the room
 - ☐ When the teacher lifted the hen
 - ☐ When the children first went to the cage
 - ☐ While some of the children were waiting for the others to come
58. Why wouldn't the teacher let the children move the hen from the nest?
- ☐ Because the children might frighten the hen
 - ☐ Because the hen might hurt the children
 - ☐ Because all of the children were not yet in the room
 - ☐ Because the little chicks would get cold

(Do not turn this page until you are told to do so.)

PART II. VOCABULARY

Directions: In each exercise, decide which one of the four words in **heavy** type has most nearly the same meaning as the word above them in *light*, or *italic*, type. Then place an **X** in the box in front of the word that you choose. The sample is marked correctly.

Sample:

0. A *large* house

- ☐ small
☐ pretty
☒ big
☐ tiny

1. Worn *garments*

- ☐ gears
☐ threads
☐ paths
☐ clothing

2. *Hastily* done

- ☐ half
☐ poorly
☐ quickly
☐ easily

3. A *husky* dog

- ☐ strong
☐ shaggy
☐ fast
☐ alert

4. A costly *gem*

- ☐ watch
☐ affair
☐ jewel
☐ mine

5. An iron *bar*

- ☐ wall
☐ wire
☐ ball
☐ rod

6. He *bid* a dime

- ☐ lost
☐ longed for
☐ offered
☐ found

7. A *calm* day

- ☐ windy
☐ warm
☐ still
☐ exciting

8. Are you *ill*?

- ☐ tired
☐ sick
☐ crazy
☐ serious

9. Meet my *chum*

- ☐ friend
☐ host
☐ visitor
☐ lover

10. *Tend* the sheep

- ☐ scare
☐ care for
☐ dispose of
☐ mark

11. An odd *noise*

- ☐ sight
☐ smell
☐ feeling
☐ sound

12. *Toss* the ball

- ☐ kick
☐ roll
☐ throw
☐ bounce

13. *Limb* of a tree

- ☐ bark
☐ root
☐ trunk
☐ branch

14. *Cargo* of wheat

- ☐ load
☐ kind
☐ crop
☐ field

15. A head *bandage*

- ☐ size
☐ wrap
☐ leader
☐ ache

16. The dairy *barn*

- ☐ pen
☐ building
☐ feed
☐ pasture

17. Herd of *cattle*

- ☐ goats
☐ pigs
☐ sheep
☐ cows

18. An *errand* boy

- ☐ mistaken
☐ unknown
☐ messenger
☐ curious

19. He may *escape*

- ☐ fall apart
☐ be hurt
☐ get angry
☐ get away

20. A *swollen* stream

- ☐ swift
☐ boiling
☐ yellow
☐ enlarged

21. We need it *badly*

- ☐ only a little
☐ very much
☐ slightly
☐ carefully

22. He likes to *boast*

- ☐ brag
☐ play
☐ coast
☐ sulk

23. Received no *reply*

- ☐ encouragement
☐ answer
☐ help
☐ reward

24. *Tumbled* downstairs

- ☐ walked
☐ ran
☐ jumped
☐ fell

25. Across the *marsh*

- ☐ pasture
☐ desert
☐ river
☐ swamp

26. *Allow* me to help

- ☐ call
☐ send
☐ permit
☐ ask

27. *Beast* of burden

- ☐ monster
☐ animal
☐ train
☐ cause

28. *Delay* your answer

- ☐ speed up
☐ put off
☐ emphasize
☐ destroy

29. I *dread* the night

- ☐ like
☐ long for
☐ fear
☐ remember

30. Please *forgive* me

- ☐ forget
☐ admire
☐ listen to
☐ pardon

31. At that very *instant*

- ☐ thought
☐ idea
☐ event
☐ moment

32. *Capture* the thief

- ☐ catch
☐ hang
☐ chase
☐ fine

33. I am *certain* about

- ☐ sure
☐ doubtful
☐ curious
☐ thankful

34. They like *visitors*

- ☐ gifts
☐ questions
☐ dancers
☐ callers

35. To *violate* the law

- ☐ break
☐ accept
☐ know
☐ enforce

36. *Entertain* your friend

- ☐ visit
☐ invite
☐ amuse
☐ encourage

37. *Distribute* the gifts

- ☐ discard
☐ pass out
☐ put away
☐ purchase

38. His friend is *false*

- ☐ not true
☐ kind
☐ stubborn
☐ faithful

39. Won't you *inquire*?

- ☐ look
☐ ask
☐ cry
☐ hurry

40. Will you *greet* them?

- ☐ welcome
☐ see
☐ listen to
☐ scorn

(Turn your booklet over and wait until the papers are collected.)

IOWA EVERY-PUPIL TESTS OF BASIC SKILLS

DIRECTIONS FOR SCORING

TEST A: SILENT READING COMPREHENSION

ELEMENTARY BATTERY—GRADES 3, 4, AND 5

FORM L

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THESE directions have been developed through very extensive experience in the use of keys of this character and through a careful motion study of the detailed operations involved. The directions should be followed in complete detail if the key is to be employed with maximum effectiveness.

- 1) Work at a large table or desk surface. Place all of the reading tests to be scored in a pile directly in front of you and about eighteen inches from the edge of the table.
- 2) Take up the key labeled "El. A 2-3." (This key may be held in your left hand throughout the time it is in use.) Take the top paper from the pile with your right hand and place it before you, open to pages 2 and 3. Adjust the key to page 2 of the pupil's paper, so that triangle 1 at the top of the page fits exactly into notch 1 at the top of the key and triangle 2 fits into notch 2.
- 3) Beginning with the hole labeled "Begin here," count the crosses appearing through the holes joined by the heavy black line (running down the first column and up the second column of responses). Follow the line carefully to avoid missing any holes. The number of crosses counted will be the pupil's score on page 2. *Keep this number in mind.*
- 4) Now adjust the key to page 3, so that triangle 3 fits into notch 3 and triangle 4 into notch 4. Then, starting at the hole labeled "Begin here for page 3," count the crosses as before, but *begin counting from the number representing the score on page 2 that you have been keeping in mind.* (For example, if the score on page 2 was 5, you would *begin counting* on page 3 with the number 6.) Follow the open line. You will then end with the *cumulative* score on pages 2 and 3. Enter this score in the box at the lower right-hand corner of page 3. (Keep a pencil in your right hand throughout the entire scoring process.)
- 5) Now lift the key and lay the paper aside to your right, *leaving it open at pages 2 and 3*, but with these pages *face down*. (This is to insure that all papers will be kept in their original order throughout the scoring process.)
- 6) Score pages 2 and 3 of the remaining papers in the same fashion, laying each paper, with pages 2 and 3 *face down*, on the pile to your right.
- 7) When pages 2 and 3 have been scored on all papers, turn the pile over and place it immediately in front of you.
- 8) Now pick up the key labeled "El. A 4-5" in your left hand. Note carefully the score in the lower right-hand corner of page 3 of the top paper. *Keeping this number in mind*, turn to pages 4 and 5, without removing the paper from the pile. Adjust the key to page 4 so that triangle 5 fits into notch 5 and triangle 6 into notch 6. Then, counting *from* the number you have kept in mind, start at the hole labeled "Begin here for page 4" and count the crosses appearing through the holes joined by the heavy black line. You will thus end with the *cumulative* score on pages 2, 3, and 4. *Keeping this score in mind*, adjust the key to page 5 so that triangle 7 fits into notch 7 and triangle 8 into notch 8, and *continue* counting crosses. Follow the open line carefully. You will then end with the cumulative score on pages 2 to 5 inclusive. Enter this score in the box at the lower right-hand corner of page 5.
- 9) Now lift the key and lay the paper aside to your right, *leaving it open at pages 4 and 5*, but with these pages *face down*.
- 10) Score pages 4 and 5 on the remaining papers in the same fashion, laying each paper, with pages 4 and 5 *face down*, on the pile to your right.
- 11) When pages 4 and 5 have been scored on all papers, turn the pile over and place it again before you.
- 12) Now pick up the key labeled "El. A 7." Note carefully the score in the lower right-hand corner of page 5 of the top paper. *Keep this number in mind*, and turn to page 7. Adjust the key to page 7, so that triangle 9 fits in notch 9 and triangle 10 in notch 10. Then, counting *from* the number you have kept in mind, count the crosses appearing through the holes joined by the heavy line. You will then end with the *cumulative* score on pages 2-7 inclusive, which is the score on Part I. Enter this score on the *title page* in the appropriate blank,

and lay the closed booklet aside to your right, with the title page up.

- (13) Score page 7 of the remaining papers in the same fashion, laying each booklet aside, with the title page *up*, on the pile at your right.
- (14) When page 7 has been scored on all papers, turn the pile over and place it again before you.
- (15) Now pick up the key labeled "El. A 8." Adjust the key to page 8, and count the crosses appearing through the holes, following the heavy line to

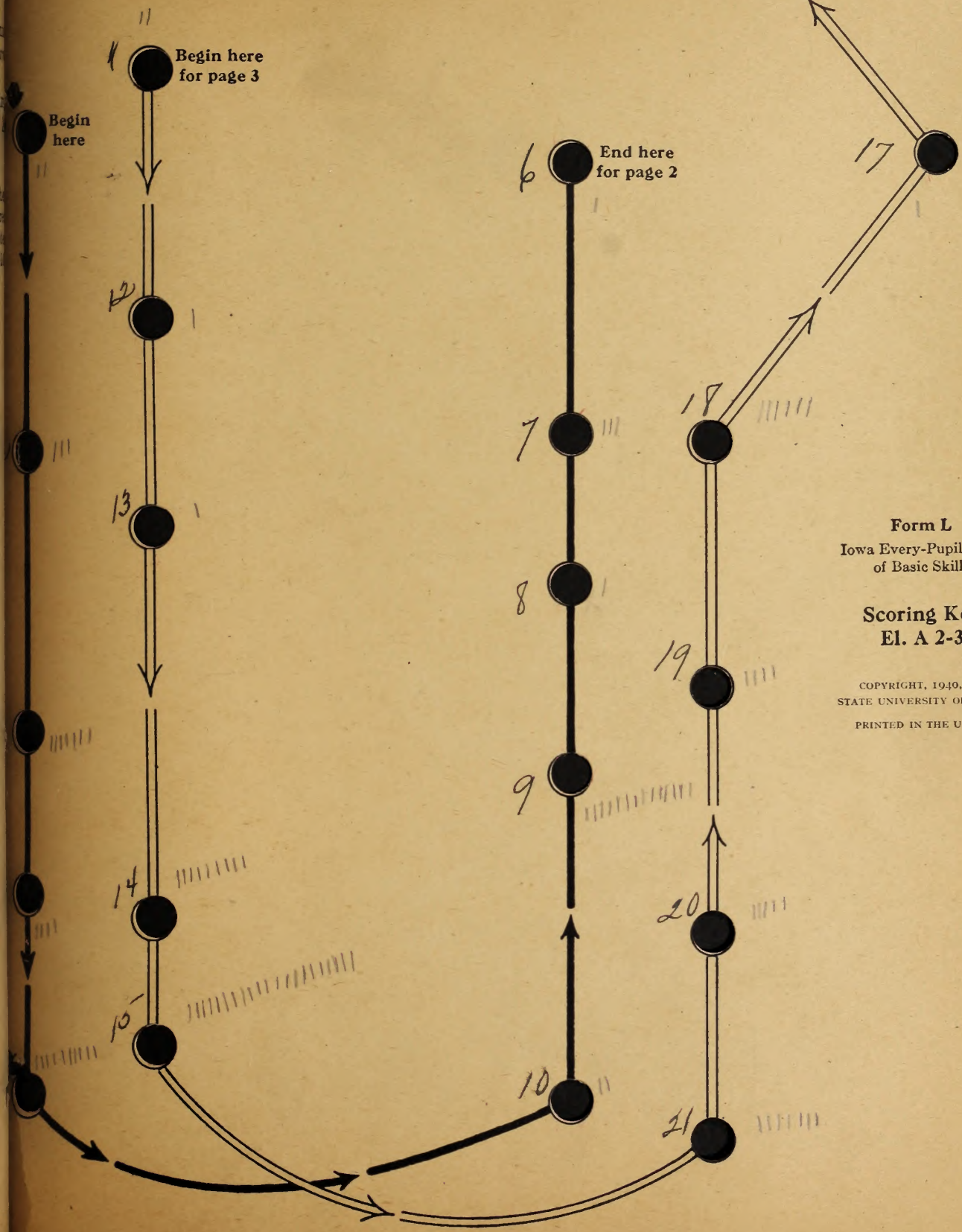
make sure no holes are skipped. The number of crosses counted is the score on Part II. Enter this score in the appropriate blank on the title page. Then lay the booklet aside to your right with the title page *down*.

- (16) Score Part II of the remaining papers in the same way, laying each booklet, with the title page *down*, on the pile at your right.

When Part II has been scored on all papers and the pile turned over, all papers should be found in their original order.

NOTE. If two scorers are available, let one perform steps 1-6 inclusive. As soon as he has scored a few papers, the other scorer may begin doing steps 7-10. (If the papers are always placed face down as directed, the pile of papers already scored may be picked up and turned over at any time without disturbing their original order.) When the first scorer completes steps 1-6, he may begin on steps 11-13, and when the second scorer completes steps 7-10, he may continue with steps 14-16.

If four scorers are available, let each one work with a different key, as suggested in the preceding paragraph.



Form L
Iowa Every-Pupil Tests
of Basic Skills

Scoring Key
El. A 2-3

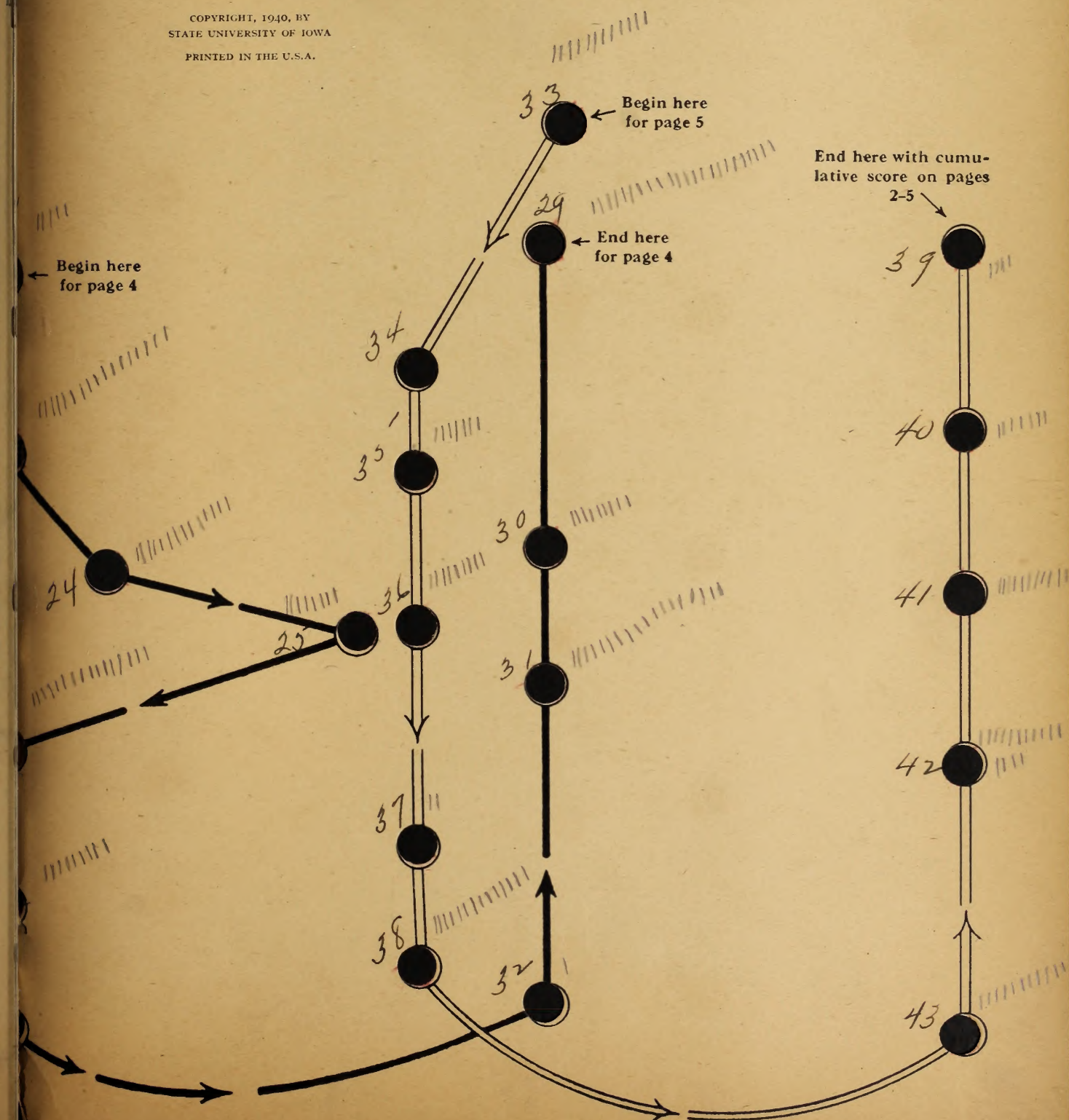
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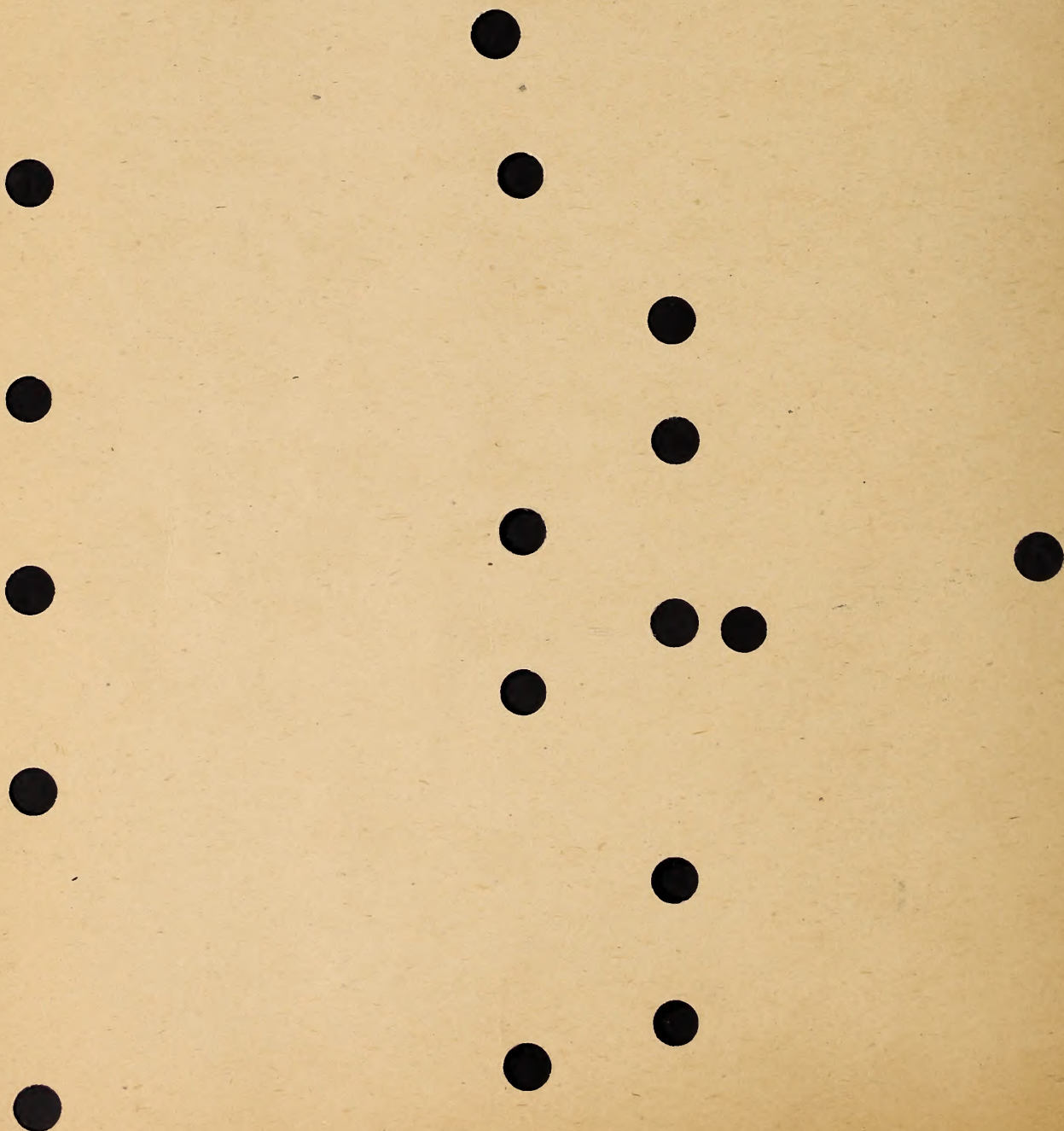
Form L
Iowa Every-Pupil Tests
of Basic Skills

Scoring Key

E1. A 4-5

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← Begin here
for page 7

← End here with
score on Part I

52

53

54

55

56

57

58

Form L
Iowa Every-Pupil Tests
of Basic Skills

Scoring Key
El. A 7

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A SUMMARY REPORT OF GRADE EQUIVALENT SCORES OF INDIVIDUAL PUPILS on the Iowa Every-Pupil Tests of Basic Skills for Grades 3 to 9

Sch. No.
Bldg. No.

Name of school building: ----- City or District: ----- County: ----- State: -----
(The pupils whose scores are reported on this sheet* are just beginning or will shortly begin the ----- semester of the ----- grade.)
Date: -----

* Use a separate sheet for each grade group in the building. If more than one sheet is necessary for a single grade group, clip sheets together.

Pupil No.	Names of Pupils (Arrange in alphabetical order of last names. Write last name first)	Sex (Write B or G)	Age in Years Last Birthday	Months Since Last Birthday	Test A: Reading					Test B: Work-Study Skills					Test C: Language Skills					Test D: Arithmetic Skills			
					Part I	Part II	Part I	Part II	Part III	Part IV	Part V	Total	Part I	Part II	Part III	Part IV	Part V Elem. only	Total	Part I	Part II	Part III	Total	
1																							
2																							
3																							
4																							
5																							
6																							
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23																							

[illegible]

TEST A: SILENT READING COMPREHENSION

Table of Grade Norms and Approximate Age Norms for
the Iowa Every-Pupil Tests of Basic SkillsPart IPart I (Cont.)Part II

Score	Grade Equiv.	Age Equiv.	Score	Grade Equiv.	Age Equiv.	Score	Grade Equiv.	Age Equiv.
5	1-0	6-2	45	6-5	11-6	1	1-0	6-3
6	1-2	6-4	46	6-8	11-9	2	1-3	6-6
7	1-4	6-6	47	7-0	12-0	3	1-4	6-7
8	1-7	6-9	48	7-2	12-2	4	1-5	6-8
9	1-9	6-11	49	7-6	12-6	5	1-7	6-10
10	2-0	7-2	50	7-9	12-9	6	1-9	7-0
11	2-2	7-4	51	8-3	13-6	7	2-1	7-3
12	2-4	7-6	52	8-7	13-10	8	2-2	7-4
13	2-5	7-7	53	9-1	14-3	9	2-4	7-6
14	2-6	7-8	54	9-4	14-6	10	2-5	7-7
15	2-8	7-10	55	9-7	14-9	11	2-7	7-9
16	2-9	7-11	56	9-9	14-11	12	2-9	7-11
17	3-0	8-3	57	10-3	15-4	13	3-0	8-3
18	3-1	8-4	58	10-5	15-6	14	3-1	8-4
19	3-2	8-5	For full information regarding norms for the IOWA EVERY-PUPIL TESTS OF BASIC SKILLS, see the MANUAL FOR INTERPRE- TATION, and the MANUAL OF NORMS, For com- plete information regarding the deri- vation of age norms, please address the Houghton Mifflin office which serves you.			15	3-3	8-6
20	3-2	8-5				16	3-4	8-7
21	3-3	8-6				17	3-5	8-8
22	3-4	8-7				18	3-6	8-9
23	3-5	8-8				19		
24	3-6	8-9				20	3-7	8-10
25	3-7	8-10				21	3-8	8-11
26	3-8	8-11				22	3-9	9-0
27	3-9	9-0				23	4-0	9-3
28	4-0	9-2				24		
29	4-1	9-3				25	4-1	9-4
30	4-2	9-4				26	4-2	9-5
31	4-3	9-5				27	4-3	9-6
32	4-4	9-6				28	4-4	9-7
33	4-5	9-7				29	4-5	9-8
34	4-6	9-8				30	4-7	9-10
35	4-7	9-9				31	4-8	9-11
36	4-8	9-10				32	4-9	10-0
37	4-9	9-11				33	5-1	10-4
38	5-0	10-2				34	5-3	10-6
39	5-2	10-4				35	5-6	10-9
40	5-4	10-6				36	5-9	11-0
41	5-5	10-7				37	6-3	11-6
42	5-8	10-10				38	6-9	12-0
43	6-0	11-1				39	7-6	12-6
44	6-2	11-3				40	8-5	13-6

Norms for total scores on other side.

HOUGHTON MIFFLIN COMPANY

Boston New York Chicago Dallas Atlanta San Francisco

Total

Score	Grade Equiv.	Age Equiv.
6	1-0	6-2
7	1-1	6-3
8	1-2	6-4
9	1-3	6-5
10	1-4	6-6
11	1-5	6-7
12	1-6	6-8
13	1-7	6-9
14	1-8	6-10
15	1-9	6-11
16	1-9	6-11
17	2-0	7-2
18	2-1	7-3
19	2-2	7-4
20	2-3	7-5
21	2-4	7-6
22	2-4	7-6
23	2-5	7-7
24	2-5	7-7
25	2-6	7-8
26	2-7	7-9
27	2-8	7-10
28	2-8	7-10
29	2-9	7-11
30	3-0	8-3
31	3-0	8-3
32	3-1	8-4
33	3-1	8-4
34	3-2	8-5
35	3-2	8-5
36	3-3	8-6
37	3-3	8-6
38	3-4	8-7
39	3-4	8-7
40	3-5	8-8
41	3-5	8-8
42	3-6	8-9
43	3-6	8-9
44	3-6	8-9
45	3-7	8-10
46	3-7	8-10
47	3-8	8-11
48	3-8	8-11
49	3-9	9-0

Total (Cont.)

Score	Grade Equiv.	Age Equiv.
50	3-9	9-0
51	4-0	9-2
52	4-0	9-2
53	4-0	9-2
54	4-1	9-3
55	4-1	9-3
56	4-2	9-4
57	4-2	9-4
58	4-3	9-5
59	4-3	9-5
60	4-4	9-6
61	4-4	9-6
62	4-5	9-7
63	4-5	9-7
64	4-6	9-8
65	4-7	9-9
66	4-7	9-9
67	4-8	9-10
68	4-8	9-10
69	4-9	9-11
70	4-9	9-11
71	5-0	10-2
72	5-1	10-3
73	5-2	10-4
74	5-3	10-5
75	5-4	10-6
76	5-5	10-7
77	5-7	10-9
78	5-8	10-10
79	6-0	11-1
80	6-2	11-3
81	6-4	11-5
82	6-5	11-6
83	6-7	11-8
84	6-8	11-9
85	7-0	12-0
86	7-2	12-2
87	7-4	12-4
88	7-6	12-6
89	7-9	12-9
90	8-3	13-6
91	8-5	13-8
92	8-7	13-10

IOWA EVERY-PUPIL TESTS OF BASIC SKILLS **MASK FOR PLOTTING SCORES ON ELEMENTARY BATTERY, FORM L** On the Individual Cumulative Record Form

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NOTE: Since the standard scale here used is based on grade norms, this mask also constitutes a table of grade norms for the Elementary Battery (Form L). The first digit in the standard score represents the grade, the second digit the month within grade. For example, the norm for the end of the fifth month in the eighth grade (standard score) is 51 on Part I, and 40 on Part II of Test A. A score of 19 on Part I, of Test C corresponds to a standard score of 43, meaning that it is the median score made by fourth-grade pupils at the end of the third month. Standard scores ending in 0 correspond to beginning-of-the-year norms, those ending in 9 to end-of-the-year norms. Norms for grades 6 and above and for grades 2 and below were secured by linear extrapolation, and must be considered as approximate only.

DIRECTIONS: To plot the profile of test performance for a pupil, lay this mask over his Cumulative Record Form so that the vertical lines on the form appear centered in the corresponding slots on this mask, and so that the heavy horizontal lines (for various standard scores) on the mask coincide with the corresponding lines on the form. Then locate the pupil's score on Part I of Test A on the scale printed along the right-hand edge of the first slot, and place a small X opposite this score on the vertical line appearing through the slot. Plot the scores on the other parts of the battery through the appropriate slots in the same fashion. Then lift the mask and join the X's by straight lines to form a continuous profile.

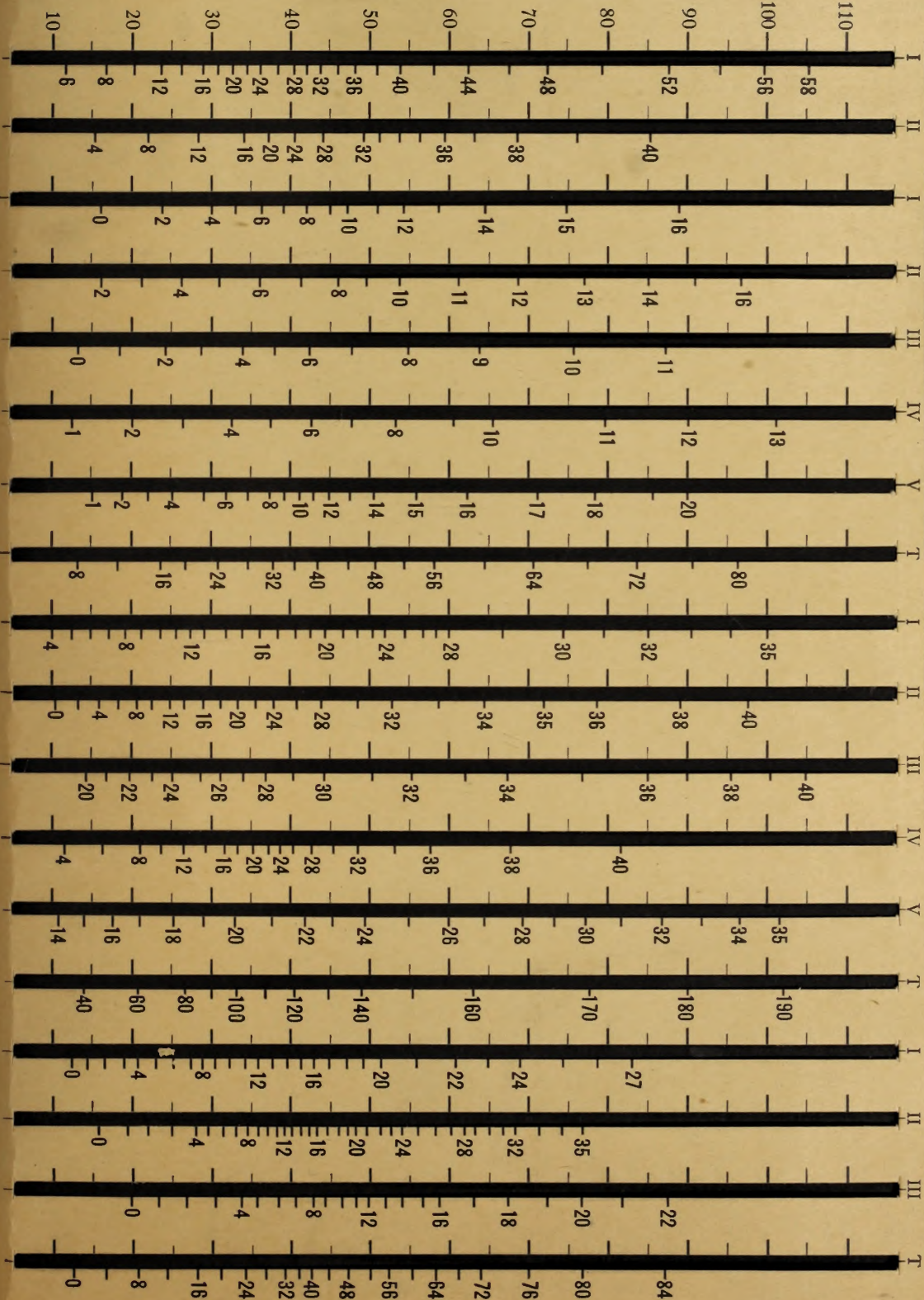
Standard Scale

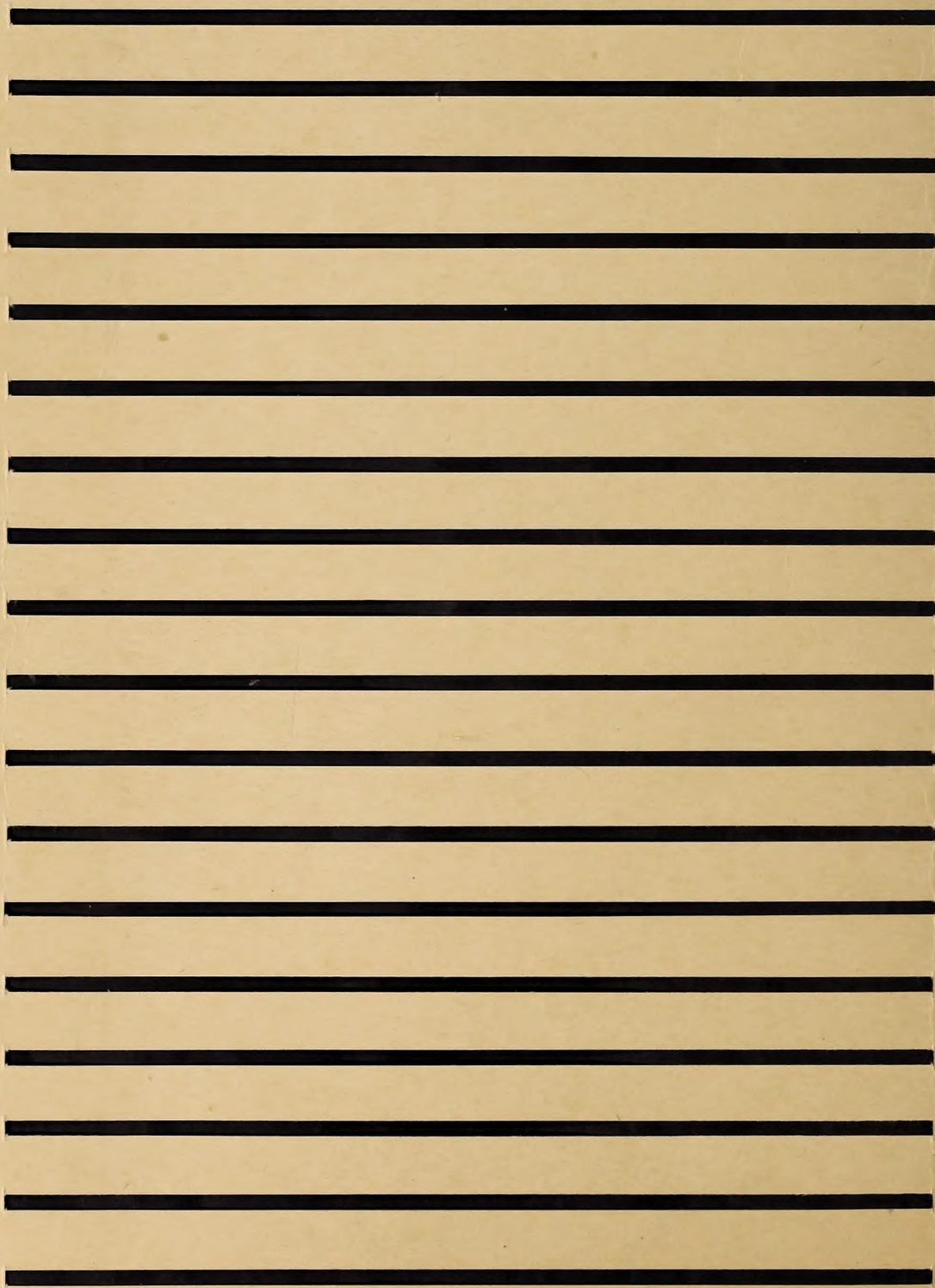
A: Reading

B: Work-Study Skills

C: Language Skills

D: Arithmetic Skills





Pupil's Name _____

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**INDIVIDUAL
CUMULATIVE RECORD
of performance on
the IOWA EVERY-
PUPIL TESTS of
BASIC SKILLS**

Record of testings:	Test A Reading		Test B Work-Study Skills							Test C Language Skills					Test D Arithmetic Skills			
	Reading Comprehension	Vocabulary	I Map Reading	II Use of References	III Use of Index	IV Use of Dictionary	V Alphabet'z'n (El.) Graphs (Adv.)	Total Score on Test B	I Punctuation	II Capitalization	III Usage	IV Spelling	V Sentence Sense (El.)	Total Score on Test C	I Fundamental Knowledge	II Fundamental Operations	III Problems	Total Score on Test D
1.																		
Date: _____																		
Grade: _____																		
Building: _____																		
2.																		
Date: _____																		
Grade: _____																		
Building: _____																		
3.																		
Date: _____																		
Grade: _____																		
Building: _____																		
4.																		
Date: _____																		
Grade: _____																		
Building: _____																		
5.																		
Date: _____																		
Grade: _____																		
Building: _____																		
6.																		
Date: _____																		
Grade: _____																		
Building: _____																		

Standard Scale

110
100
90
80
70
60
50
40
30
20
10

60

SUPPLEMENT TO
MANUAL FOR INTERPRETATION

NORMS
for
Iowa Every-Pupil Tests of
Basic Skills

Form L

HOUGHTON MIFFLIN COMPANY

BOSTON • NEW YORK • CHICAGO • DALLAS • ATLANTA • SAN FRANCISCO

The Riverside Press Cambridge

Foreword

THIS booklet, containing the norms for Form L of the Iowa Every-Pupil Tests of Basic Skills, is to be considered as a supplement to the *Manual for Interpretation*. The norms have been printed separately in order to expedite their publication and to make them more convenient to use. All discussions of the nature and significance of the norms, of the relative advantages of the various types of norms supplied, and of important considerations in the interpretation of the norms, are contained in Parts II and III of the *Manual*. This supplement contains only the tables of norms and brief explanations of how the tables may be read.

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NORMS

for

Iowa Every-Pupil Tests of Basic Skills

FORM L

1. *The Population on Which the Norms are Based*

The norms for Form L of these tests were derived from the 1940 Iowa Every-Pupil Basic Skills Testing Program, which involved over 79,000 pupils in 342 school systems. From these, 52,561 pupils in 335 school systems were selected as a sample for the establishment of the norms. These pupils and systems were distributed by grades as follows:

	<i>Pupils</i>	<i>Systems</i>
Grade 3	7,233	286
4	7,614	291
5	8,196	299
6	9,239	311
7	11,161	314
8	9,118	315
	<u>52,561</u>	

Because of the large systematic differences in the level of achievement from school to school, the dependability and meaningfulness of a norm established for a standardized test depend far more upon the number of *schools* than upon the number of pupils involved in the standardization program. It is obvious, for example, that 1000 pupils from a single school contribute far less to the representativeness of a norm than do 1000 pupils from many different schools widely distributed as to size, type, quality of instruction, and geographical location. The number of schools represented in the norms herein reported is, therefore, of particular significance, especially since it makes possible the establishment of reliable norms of *school* achievement (see Tables 19 to 24).

The schools involved in the Iowa program are located in communities that range in size of population from a few hundred to more than two hundred thousand, the majority numbering between 1000 and 50,000. All are graded public schools; no one-room rural schools are included. The majority of the schools are Iowa schools (about 18,000 pupils were tested in schools located in Illinois, Missouri, Minnesota, Nebraska, Wisconsin, Oklahoma, Arizona, New York, New Mexico, Montana, and the Dakotas). While the norms may, therefore, best be characterized as Midwestern norms, it is likely that they are as representative of nationwide public school achievement as any of the so-called national norms that have been established for standardized tests.

The Iowa Every-Pupil Basic Skills Testing Program includes from year to year a highly stable population of schools. This means that the norms for succeeding editions of this battery will be established for essentially the same population of schools and so will be highly comparable to those herein reported. This fact is of particular significance to schools that wish to secure measures of *progress* through systematic periodic testing with later editions of these tests.

2. Grade Norms

The grade norms for the Elementary and Advanced batteries are presented graphically in Tables 1 and 2, respectively. The "standard" or grade-equivalent scale is given at the left of the table. The first digit in a "standard" score represents the grade, the second digit the month within the grade. For each subtest, the "standard" score and raw score scales are given along the left- and right-hand sides, respectively, of the vertical line corresponding to the subtest.

The manner in which these tables may be read will be illustrated for Table 1. For Part I of Elementary Test A, for example, a raw score of 36 corresponds to a "standard" score of 48. This means that 36 is the median score made by fourth-grade pupils at the end of the eighth month in that grade. Similarly, a raw score of 38 on A-I is that made by the typical pupil in the fifth grade at the end of the first month. On Part IV of Test C, similarly, a raw score of 31 corresponds to a standard score of 47, that is, the typical fourth-grade pupil will make a score of 31 on C-IV at the end of the seventh month.

Standard scores ending in 0 represent beginning-of-the-year norms; those ending in 9 represent end-of-the-year norms. A typical fourth-grade pupil tested at midyear, or at the end of the first semester, would be expected to make a "standard" score of 44.5, and his "expected" raw score would be 33; at the end of the second semester his "expected" raw score is 37 (corresponding to a standard score of 49). Thus, it may

TABLE 1. GRADE NORMS FOR ELEMENTARY BATTERY

[illegible]

TABLE 2. GRADE NORMS FOR ADVANCED BATTERY

Standard Scale	B: Work-Study Skills					C: Language Skills				D: Arithmetic Skills			
	I	II	III	IV	V	I	II	III	IV	I	II	III	IV
110	64	-21	-16	-20	-20		-80	-72		280	-36	-18	83
100	56	-20	-14	-18	-18	-88	-68	-48		260	-32	-16	80
90	48	-18	-16	-16	-16	-80	-64	-44		240	-28	-12	72
80	40	-16	-14	-14	-14	-72	-60	-40		220	-24	-10	64
70	32	-14	-12	-12	-12	-64	-56	-36		200	-20	-8	56
60	24	-12	-10	-10	-10	-56	-48	-32		180	-16	-6	48
50	16	-10	-8	-8	-8	-48	-40	-24		160	-12	-4	40
40	8	-8	-6	-6	-6	-40	-32	-16		140	-8	-2	32
30	0	-6	-4	-4	-4	-32	-24	-12		120	-4	0	24
20	-8	-4	-2	-2	-2	-24	-16	-8		100	0	0	16
10	-16	-2	0	0	0	-16	-8	-4		80	0	0	8
	-24	0	0	0	0	-8	-4	-2		60	0	0	0
	-32	0	0	0	0	-4	-2	-1		40	0	0	0
	-40	0	0	0	0	0	-1	-1		20	0	0	0
	-48	0	0	0	0	0	0	0		0	0	0	0

be seen in Table 1 that the midyear norm for the fourth grade is about 33 for A-I, 28 for A-II, 9 for B-I, 7.6 for B-II, etc.

The masks for plotting individual pupil profiles may be used instead of these tables to derive grade-equivalents of raw scores.

[Note: All pupils in the standardization program were tested at mid-year; hence, the standard scales for the Elementary battery were established with reference to the points 34.5, 44.5 and 54.5, and those for the Advanced battery to the points 64.5, 74.5 and 84.5. The remainder of each scale was determined by linear interpolation and extrapolation. The interpolated values are highly dependable, but the extreme extrapolated values should be used with caution. That is, grade-norm equivalents of raw scores at either end of the scales should be considered as only approximate in character, and should not be taken too literally. A standard scale based on grade-norms seems as good as any other practicable basis for plotting test profiles, but, as has been noted in the *Manual for Interpretation* (pages 17-19), the grade-percentile norms are more meaningful for interpreting high and low performances.]

3. *Grade-Percentile Norms of Pupil Achievement*

The grade-percentile norms are presented in semi-graphic form in Tables 3-8. This form of table has advantages of compactness and convenience in use; also, it avoids the approximations and incompleteness of the ordinary percentile table in which only a few selected percentiles are shown. In the graphic form of table, the *exact* percentile equivalent may be determined for *any* score.

The manner in which these tables may be read will be illustrated for Table 3. The scale along the left-hand and right-hand margins of the table is the percentile scale based upon the distribution of the scores of 7233 third-grade pupils on the Elementary battery (see page 1). The vertical scales below the various test titles show the raw scores corresponding to the various percentile values. For example, a score of 10 on the Map Reading test (Part I of Test B) corresponds to the 80th percentile in the distribution of scores on this test for third-grade pupils tested at the end of the year, i.e., 80 per cent of all such pupils scored below 10 on the Map Reading test. Similarly, a total score of 145 on Test C falls at the 88th percentile, a score of 4 on Part III of Test D at the 23rd percentile, etc. The dotted and solid horizontal lines running across the chart facilitate finding the percentile rank of any given score. Tables 4-8 may be read in the same fashion as Table 3.

It is important to note that these tables are for end-of-the-year performance only. Percentile norms for performance at other times during the year may, if desired, be secured by interpolation between values derived from successive end-of-the-year tables.

TABLE 3. PERCENTILE NORMS FOR ELEMENTARY BATTERY

For Grade 3 Pupils (TESTED AT END OF YEAR)

Test A Reading		Test B Work-Study Skills						Test C Language Skills					Test D Arithmetic Skills				
Comprehension	Vocabulary	Map	Use of References	Use of Index	Use of Dictionary	Alphabetizing	Total Score on Test B	Punctuation	Capitalization	Usage	Spelling	Sentence Sense	Total Score on Test C	Fundamental Knowledge	Fundamental Operations	Problems	Total Score on Test D
99	51	39	13	11	18	60	37	30	37	36	38	30	165	16	20	16	56
98						56	28	28					160				56
97	48		12	10	10	52								22		14	52
96													150		18		
95						48		24	34	36				20		12	48
90	44	36	12	9	9												
85	40	32	10	8	8	44	32		32	26			140	18	16	10	44
80	36		8	7	7	40	20	20		32	32		130	16			40
75				6	6					30	28			14	14	8	36
70	32	28	8			36	28						120				
65	28																
60	24																
55	20																
50	16																
45	12																
40	8																
35	4																
30																	
25																	
20																	
15																	
10																	
5																	
4																	
3																	
2																	
1																	

TABLE 4. PERCENTILE NORMS FOR ELEMENTARY BATTERY
For Grade 4 Pupils (TESTED AT END OF YEAR)

Test A Reading			Test B Work-Study Skills					Test C Language Skills					Test D Arithmetic Skills				Percentile Scale		
Reading Comprehension	Vocabulary		Map	Use of References	Use of Index	Use of Dictionary	Alphabetizing	Total Score on Test B	Punctuation	Capitalization	Usage	Spelling	Sentence Sense	Total Score on Test C	Fundamental Knowledge	Fundamental Operations		Problems	Total Score on Test D
99																			99
98																			98
97	52	40		16	11	12	19	68	33	38	38		33	175		28	20	72	97
96																			96
95																			95
90																			90
85	48			12	10		18	60		36	36		30	160	24	26	18	64	85
80																			80
75	44	36			9		16	56	28		34		28	150	22	24	16	60	75
70																			70
65																			65
60																			60
55	40			10	8	8	14	52	24	32	32		26		20	22	14	56	55
50																			50
45	36			7	7			48											45
40																			40
35	32	28		8	6	6	12	44	20	28	30	32	22	130	18	20	10	48	35
30																			30
25	28	24			5	5	10	40			28	28	20		16	18	8	44	25
20																			20
15	24							36	16	24	26	24	20	120	14	16	6	40	15
10	20			6	4	4	8	32				20	18	110					10
5																			5
4	16				3	3	6	28		20	24	16	16	100	12	12	4	32	4
3																			3
2					2	2	4	24	12	16	22	12	14	90	10	10	8	28	2
1	12	9					3		10	12	20	10	12	80	8	8	2	24	1

TABLE 6. PERCENTILE NORMS FOR ADVANCED BATTERY
For Grade 6 Pupils (TESTED AT END OF YEAR)

Test A Reading				Test B Work-Study Skills						Test C Language Skills				Test D Arithmetic Skills				
Reading Comprehension		Vocabulary		Map	Use of References	Use of Index	Use of Dictionary	Graphs	Total Score on Test B	Punctuation	Capitalization	Usage	Spelling	Total Score on Test C	Fundamental Knowledge	Fundamental Operations	Problems	Total Score on Test D
99																		
98	60	42					21	19				72	46		30	38	14	76
97							20	18	88	68					29	36		72
96	56	40						18			76						12	
95												68						95
90								16	80	64			40	240	24	32	10	64
85																		85
80								14	72		72	64	36	220	20	28	8	56
75	40	28						12	64	56								75
70												60	32			24	6	60
65								10										65
60																		55
55	32	24	14			10	12	12	56									50
50																		45
45								10			64	56	28	200	16			40
40										48						20	4	35
35									48									30
30							10	8				52	24	180		16		25
25	24	16																20
20													20		12		2	15
15								6	40	40	56	48						10
10																12		5
5												44	16	160				4
4								4	32	32	48					8		3
3												40	12	140	8			2
2									28	24	40							1
1								3		16	32	36	10	120		5	0	

TABLE 7. PERCENTILE NORMS FOR ADVANCED BATTERY
For Grade 7 Pupils (TESTED AT END OF YEAR)

Test A Reading		Test B Work-Study Skills						Test C Language Skills				Test D Arithmetic Skills				
Comprehension	Vocabulary	Map Reading	Use of References	Use of Index	Use of Dictionary	Graphs	Total Score on Test B	Punctuation	Capitalization	Usage	Spelling	Total Score on Test C	Fundamental Knowledge	Fundamental Operations	Problems	Total Score on Test D
I	II	I	II	III	IV	A		I	II	III	IV		I	II	III	
99	46				22		100	72					34		18	88
98		26	17	19		20	96		80	74	48		32	40	16	98
97	44	24	16		20							260				
96				18			85			72			28		14	80
95						18			76		44					
90	40	22				18									12	
85		20	14	16	18		80	68		64		240	24	36	10	72
80	36					16			72		40			32		
75		18	12	14	16											
70	32						72									
65																
60		16				14						220			8	64
55	40										36		20			
50	28		10	12	14		64	56		60				29		56
45		14				12									6	
40	24						56		64	56	32	200		24		
35	32			10	12								16			48
30		12	8			10		48		52	28			20	4	
25	20			8	10		48					180				
20		10	6			8			56	48	24			16		40
15	16			6	8		40	40					12		2	32
10											20					
5	12	8	4			6				44		160	10	12	1	24
4				4	6			32	43		16			8		
3							32		44	40						
2	10	6	3		5	4					14	140				20
1								24								
Percentile Scale																
99	Percentile Scale															
98	Percentile Scale															
97	Percentile Scale															
96	Percentile Scale															
95	Percentile Scale															
90	Percentile Scale															
85	Percentile Scale															
80	Percentile Scale															
75	Percentile Scale															
70	Percentile Scale															
65	Percentile Scale															
60	Percentile Scale															
55	Percentile Scale															
50	Percentile Scale															
45	Percentile Scale															
40	Percentile Scale															
35	Percentile Scale															
30	Percentile Scale															
25	Percentile Scale															
20	Percentile Scale															
15	Percentile Scale															
10	Percentile Scale															
5	Percentile Scale															
4	Percentile Scale															
3	Percentile Scale															
2	Percentile Scale															
1	Percentile Scale															

TABLE 8. PERCENTILE NORMS FOR ADVANCED BATTERY
For Grade 8 Pupils (TESTED AT END OF YEAR)

Test A Reading				Test B Work-Study Skills						Test C Language Skills						Test D Arithmetic Skills				Percentile Scale
Reading Comprehension	Vocabulary	Map Reading	Use of References	Use of Index	Use of Dictionary	Graphs	Total Score B on Test B	Punctuation	Capitalization	Usage	Spelling	Total Score C on Test C	Fundamental Knowledge	Fundamental Operations	Problems	Total Score D on Test D				
99	I	II	I	II	III	IV	V	I	II	III	IV	V	I	II	III	IV	99			
98	72	48	28			23	22		82	78		50	280	36	42	22	96			
97																	98			
96			26		20	22		72		76					20		97			
95												48			18		96			
														40			95			
90	64	44	24				20		80								90			
85														32		16	85			
80			22		18	20				72			260				80			
75	56	40				18			76			44		28	36	14	75			
70			20					64		68							70			
65																	65			
60																	60			
55	48	36	18		16								240			12	55			
																	50			
45		32	16		14	16	16		72	64		40		24		10	45			
40															32		40			
35	40					14	14			60						8	35			
30		28	14					56				36	220		28		30			
25					12												25			
20							12		64	56				20		6	20			
15	32	24	12		10	12						32					15			
10							10	48		52			200	24			10			
5		20	10			10						28		16		4	5			
4																	4			
3	24				8		8	48	56	48		24	180		20	40	3			
2		16				8		40						16			2			
1			8		6		6		52	44		20	170	12		32	1			
	20			5																
														</						

4. Age-at-Grade Norms

Age norms for elementary school tests often contribute to a more complete interpretation of measures of individual pupil achievement than can be made with grade and grade-percentile norms alone. Some experience in the derivation of age norms has convinced the authors of these tests that age norms or age equivalents isolated from the grade level in which the achievement takes place are likely to be misleading. In the age norms supplied with the majority of standardized tests the pupils are grouped according to chronological age without respect to their school progress or grade location. The age norms provided with the Basic Skills tests show the typical scores made by pupils of the different chronological age groups *within* each grade. Such age-at-grade norms are given in Tables 9-18 for part scores on Test A and for total scores on Tests B, C, and D for each battery.

Table 9 may be taken as typical of this group of tables. The column headed 3-2 is concerned with pupils tested at the beginning of the second semester of grade three (or at the end of the first semester). At this grade level, the average score on Part I of Test A made by pupils 10 years and 9 months old is 16. Pupils 8 years and 3 months old in the same grade made an average score of 25. As usually happens, the older individuals

ELEMENTARY BATTERY

TABLE 9
Age-at-Grade Norms for Scores on Part I
of Test A (Elementary):
Silent Reading Comprehension

Age		Grade and Semester (Beginning)					
Yr.	Mo.	3-2	4-1	4-2	5-1	5-2	6-1
13	6	..	..	..	..	..	33
13	3	..	..	..	..	..	33
13	0	..	..	..	..	29	34
12	9	..	..	..	..	30	38
12	6	..	..	..	27	30	37
12	3	..	..	..	27	33	38
12	0	..	..	23	27	33	39
11	9	..	..	24	29	34	42
11	6	..	20	24	30	35	42
11	3	..	20	25	31	38	45
11	0	16	20	26	32	39	44
10	9	16	21	26	34	41	44
10	6	16	22	28	37	41	44
10	3	17	23	30	39	41	44
10	0	17	24	34	38	41	44
9	9	19	26	36	38	40	..
9	6	20	30	35	38	40	..
9	3	21	31	35	37	..	..
9	0	25	31	34	36	..	..
8	9	26	30	33	..	..	..
8	6	25	29	32	..	..	..
8	3	25	29	..	..	..	..
8	0	24	28	..	..	..	..
7	9	24	..	..	..	..	..
7	6	23	..	..	..	..	..

TABLE 10
Age-at-Grade Norms for Scores on Part II
of Test A (Elementary):
Vocabulary

Age		Grade and Semester (Beginning)					
Yr.	Mo.	3-2	4-1	4-2	5-1	5-2	6-1
13	6	..	..	..	..	..	27
13	3	..	..	..	..	..	28
13	0	..	..	..	..	24	30
12	9	..	..	..	..	24	31
12	6	..	..	..	21	26	32
12	3	..	..	..	23	28	34
12	0	..	..	16	23	28	34
11	9	..	..	19	24	29	35
11	6	..	14	19	25	30	35
11	3	..	16	19	25	31	37
11	0	11	16	21	26	33	37
10	9	12	16	21	28	34	37
10	6	12	16	22	31	34	37
10	3	13	18	25	32	34	37
10	0	14	18	28	32	34	36
9	9	15	21	29	31	34	..
9	6	15	24	29	31	33	..
9	3	17	25	29	31	..	..
9	0	20	25	29	30	..	..
8	9	21	25	28	..	..	..
8	6	20	24	27	..	..	..
8	3	20	24	..	..	..	..
8	0	20	23	..	..	..	..
7	9	19	..	..	..	..	..
7	6	19	..	..	..	..	..

TABLE 11
Age-at-Grade Norms for Total Score
on Test B (Elementary):
Work-Study Skills

Age		Grade and Semester (Beginning)					
Yr.	Mo.	3-2	4-1	4-2	5-1	5-2	6-1
13	6	..	..	..	..	..	45
13	3	..	..	..	..	..	45
13	0	..	..	..	..	41	49
12	9	..	..	..	..	42	53
12	6	..	..	..	37	44	53
12	3	..	..	..	39	46	54
12	0	..	..	32	39	47	55
11	9	..	..	33	41	48	56
11	6	..	28	33	42	48	57
11	3	..	29	34	42	50	61
11	0	24	29	35	43	52	60
10	9	24	29	35	45	55	60
10	6	25	31	37	48	54	60
10	3	25	31	39	50	54	60
10	0	25	32	43	49	53	60
9	9	26	34	44	49	53	..
9	6	26	36	44	48	53	..
9	3	27	37	43	48	..	..
9	0	29	37	42	47	..	..
8	9	30	37	41	..	..	..
8	6	29	36	40	..	..	..
8	3	29	35	..	..	..	..
8	0	28	34	..	..	..	..
7	9	28	..	..	..	..	..
7	6	28	..	..	..	..	..

TABLE 12
Age-at-Grade Norms for Total Score
on Test C (Elementary):
Basic Language Skills

Age		Grade and Semester (Beginning)						
Yr.	Mo.	3-2	4-1	4-2	5-1	5-2	6-1	
13	6	..	..	..	..	..	..	139
13	3	..	..	..	..	..	..	140
13	0	..	..	..	..	127	141	
12	9	..	..	..	..	..	128	144
12	6	..	..	..	116	130	149	
12	3	..	..	..	118	134	151	
12	0	..	..	102	120	135	151	
11	9	..	..	109	123	138	154	
11	6	..	94	109	126	139	157	
11	3	..	99	110	127	143	162	
11	0	85	99	114	129	148	162	
10	9	85	99	115	133	152	162	
10	6	86	104	117	140	152	161	
10	3	87	104	122	144	151	161	
10	0	90	106	131	144	151	161	
9	9	92	110	134	143	151	..	
9	6	93	120	134	143	151	..	
9	3	99	122	134	143	..	..
9	0	106	121	133	142	..	..
8	9	108	121	132	..	..	..
8	6	107	120	130	..	..	..
8	3	106	120	..	..	..	..
8	0	105	117	..	..	..	..
7	9	104	..	..	..	..	..
7	6	101	..	..	..	..	..

TABLE 13
Age-at-Grade Norms for Total Score
on Test D (Elementary):
Basic Arithmetic Skills

Age		Grade and Semester (Beginning)					
Yr.	Mo.	3-2	4-1	4-2	5-1	5-2	6-1
13	6	..	..	..	..	..	54
13	3	..	..	..	..	..	55
13	0	..	..	..	..	48	59
12	9	..	..	..	..	50	61
12	6	..	..	..	..	51	62
12	3	..	..	..	44	54	63
12	0	..	..	34	44	53	63
11	9	..	..	35	46	54	63
11	6	..	28	36	46	54	66
11	3	..	28	37	46	55	69
11	0	20	29	38	47	59	68
10	9	21	30	39	49	61	68
10	6	21	30	39	52	60	68
10	3	21	31	42	54	60	68
10	0	22	32	45	53	60	67
9	9	22	34	46	53	60	..
9	6	23	36	45	53	59	..
9	3	24	37	45	52	..	..
9	0	27	36	45	51	..	..
8	9	27	36	43	..	..	..
8	6	26	36	42	..	..	..
8	3	25	35	..	..	..	..
8	0	25	34	..	..	..	..
7	9	25	..	..	..	..	..
7	6	24	..	..	..	..	..

ADVANCED BATTERY
TABLE 14
Age-at-Grade Norms for Scores on
Part I of Test A (Advanced):
Silent Reading Comprehension

Age		Grade and Semester (Beginning)						
Yr.	Mo.	6-2	7-1	7-2	8-1	8-2	9-1	
16	6	..	..	..	..	..	35	
16	3	..	..	..	..	..	35	
16	0	..	..	..	..	32	35	
15	9	..	..	..	..	32	36	
15	6	..	..	..	28	32	38	
15	3	..	..	..	29	33	39	
15	0	..	..	25	29	34	39	
14	9	..	..	26	30	36	41	
14	6	..	23	26	31	36	46	
14	3	..	24	27	33	38	48	
14	0	21	24	27	33	43	48	
13	9	22	25	29	35	44	49	
13	6	23	25	30	39	45	48	
13	3	23	27	32	41	45	48	
13	0	24	28	34	41	44	47	
12	9	24	29	37	42	44	..	
12	6	26	32	37	41	43	..	
12	3	27	34	38	41	..	..
12	0	30	34	37	39	..	..
11	9	31	35	37	..	..	..
11	6	32	34	35	..	..	..
11	3	32	34	..	..	..	..
11	0	31	33	..	..	..	..
10	9	31	..	..	..	..	..
10	6	30	..	..	..	..	..

TABLE 15
Age-at-Grade Norms for Scores on
Part II of Test A (Advanced):
Vocabulary

Age		Grade and Semester (Beginning)						
Yr.	Mo.	6-2	7-1	7-2	8-1	8-2	9-1	
16	6	..	..	..	..	..	24	
16	3	..	..	..	..	..	25	
16	0	..	..	..	..	22	25	
15	9	..	..	..	..	23	26	
15	6	..	..	..	20	23	28	
15	3	..	..	..	20	23	29	
15	0	..	..	17	21	25	31	
14	9	..	..	17	21	26	31	
14	6	..	15	18	21	26	34	
14	3	..	15	18	23	27	35	
14	0	14	16	18	24	31	35	
13	9	14	16	20	25	32	35	
13	6	15	17	21	28	32	35	
13	3	15	18	22	29	32	35	
13	0	16	19	24	29	32	35	
12	9	16	20	26	30	32	..	
12	6	17	22	26	29	32	..	
12	3	19	24	27	29	..	..
12	0	20	24	27	29	..	..
11	9	22	25	26	..	..	..
11	6	22	24	25	..	..	..
11	3	22	24	..	..	..	..
11	0	21	23	..	..	..	..
10	9	21	..	..	..	..	..
10	6	20	..	..	..	..	..

TABLE 16
Age-at-Grade Norms for Total Score
on Test B (Advanced):
Work-Study Skills

Age		Grade and Semester (Beginning)						
Yr.	Mo.	6-2	7-1	7-2	8-1	8-2	9-1	
16	6	..	..	..	..	..	59	
16	3	..	..	..	..	..	61	
16	0	..	..	..	..	53	63	
15	9	..	..	..	..	56	64	
15	6	..	..	..	49	58	66	
15	3	..	..	..	52	58	70	
15	0	..	..	44	54	60	70	
14	9	..	..	47	53	63	70	
14	6	..	40	48	55	64	77	
14	3	..	45	48	58	65	79	
14	0	37	45	49	59	71	79	
13	9	42	45	52	60	73	79	
13	6	42	45	53	66	73	79	
13	3	42	49	55	69	74	79	
13	0	42	50	59	69	73	78	
12	9	45	52	63	69	73	..	
12	6	47	56	63	69	73	..	
12	3	48	59	64	68	..	..
12	0	53	59	63	68	..	..
11	9	55	60	63	..	..	..
11	6	55	59	62	..	..	..
11	3	55	59	..	..	..	..
11	0	54	58	..	..	..	..
10	9	54	..	..	..	..	..
10	6	53	..	..	..	..	..

TABLE 17
Age-at-Grade Norms for Total Score
on Test C (Advanced):
Basic Language Skills

Age		Grade and Semester (Beginning)						
Yr.	Mo.	6-2	7-1	7-2	8-1	8-2	9-1	
16	6	...	...	...	...	...	213	
16	3	...	...	...	...	...	214	
16	0	...	...	...	...	199	214	
15	9	...	...	...	...	203	218	
15	6	...	...	...	186	203	223	
15	3	...	...	...	193	205	224	
15	0	...	...	173	194	209	224	
14	9	...	...	181	194	214	226	
14	6	...	164	181	197	214	239	
14	3	...	173	181	203	215	243	
14	0	155	173	184	204	227	240	
13	9	164	175	190	206	231	240	
13	6	165	175	194	217	232	240	
13	3	168	182	197	223	232	240	
13	0	166	187	206	223	232	240	
12	9	174	190	213	224	232	..	
12	6	179	200	213	224	232	..	
12	3	183	205	215	224	..	..
12	0	194	206	216	223	..	..
11	9	197	208	216	..	..	..
11	6	198	208	214	..	..	..
11	3	200	208	..	..	..	..
11	0	200	206	..	..	..	..
10	9	199	..	..	..	..	..
10	6	197	..	..	..	..	..

TABLE 18
Age-at-Grade Norms for Total Score
on Test D (Advanced):
Basic Arithmetic Skills

Age		Grade and Semester (Beginning)						
Yr.	Mo.	6-2	7-1	7-2	8-1	8-2	9-1	
16	6	..	..	..	..	..	57	
16	3	..	..	..	..	..	58	
16	0	..	..	..	..	50	59	
15	9	..	..	..	..	51	60	
15	6	..	..	..	44	52	61	
15	3	..	..	..	45	53	62	
15	0	..	..	37	46	54	63	
14	9	..	..	39	46	56	64	
14	6	..	33	39	47	57	69	
14	3	..	35	39	51	58	72	
14	0	28	35	40	51	63	72	
13	9	30	35	43	52	65	72	
13	6	30	36	45	57	66	73	
13	3	30	39	46	60	66	72	
13	0	31	40	51	60	66	70	
12	9	34	41	53	61	65	..	
12	6	35	46	53	60	64	..	
12	3	36	47	55	60	..	..
12	0	39	47	54	59	..	..
11	9	40	48	54	..	..	..
11	6	40	47	53	..	..	..
11	3	41	47	..	..	..	..
11	0	40	47	..	..	..	..
10	9	40	..	..	..	..	..
10	6	39	..	..	..	..	..

within the grade made lower average scores, while the younger members tended to make slightly higher scores up to a certain point. Thus, an 8-year-old pupil, on the average, made a score on this test 8 points higher than an 11-year-old pupil, both tested at the beginning of the second semester, of grade three. On the average, a child 10 years and 9 months of age in the third grade, tested at the beginning of the second semester, would make a score of 16 points on Part I of Test A. A child of the same age in the fourth grade (beginning of second semester) may be expected to make a score of 26 points, and a fifth-grade child of the same age (beginning of second semester), slightly under age for his grade, to make an average score of 41 points, somewhat better than the general average for his grade. These age-at-grade norms should be useful for the analysis of individual pupil results on the tests, particularly in the case of markedly retarded or accelerated pupils. Since these norms do not lend themselves especially well to profile treatment, they are presented here only in table form.

5. *Norms of School Achievement*

Tables 19-24 present the percentiles in the distributions of *school averages* for the separate grades. These tables may be read in much the same fashion as Tables 3-8. Table 19, for example, is based on the distributions of *average* scores made by third-grade pupils in the 387 school *buildings* which tested that grade level in the standardization program. (Each school building was considered as a separate unit. Since some of the larger systems reported results for several separate elementary schools, the number of buildings considerably exceeded the number of systems.) Table 19 shows, for instance, that an average score of 32 on Part I of Test A (Elementary) fell at the 78th percentile in the distribution of all building averages for the third grade. That is, in 78 per cent of the 387 buildings involved, the average end-of-the-year score made by third-grade pupils on this test was below 32. Similarly, if a building has a third-grade average of 25 on Part II of Test C, it has exceeded the average performance in 45 per cent of the buildings included in the program. The 75th percentile among building averages was 23.2 on Part V of Test C, 127 on the total of Test C, 16.2 on Part I of Test D, etc. Tables 20-24 may be read in the same fashion. Again, it should be noted that these are the norms for end-of-the-year performance only.

Care should be taken to avoid confusing Tables 19-24 with Tables 3-8. Tables 19-24 may not be used in interpreting results for individual pupils, and Tables 3-8 should not be used in interpreting *school* results. School averages are not nearly so variable as individual pupil scores; hence, the percentile values in the two tables may differ considerably, particularly

TABLE 20. PERCENTILE NORMS FOR SCHOOL AVERAGES (ELEMENTARY BATTERY)
Grade 4 (TESTED AT END OF YEAR)

Test A Reading				Test B Work-Study Skills						Test C Language Skills					Test D Arithmetic Skills			
Reading Comprehension	Vocabulary	Map Reading	Use of References	Use of Index	Use of Dictionary	Alphabet'z'n	Total Score on Test B	Punctuation	Capitalization	Usage	Spelling	Sentence Sense	Total Score on Test C	Fundamental Knowledge	Operations	Problems	Total Score on Test D	
99																	99	
98	36						60	30	35				160	27			98	
97	44	13	12	9		16			35	34	36	28		22	26	16	97	
96																	96	
95							56	28	34			27		21			95	
90	34	12	11		9	15			33					21		15	90	
85											34	26	150	24		14	85	
80	40		10	8		14	52	26		32		25		20			80	
75	32	11						24	32		32				22	13	75	
70																	70	
65																	65	
60																	60	
55																	55	
50	36						48						140	19			50	
45	30	10	9	7	7	13		22	30	30		24			20	12	45	
40																	40	
35																	35	
30	28		8			12	44	20				23	130	18		11	30	
25		9							28	29	28	22		17		10	25	
20	32			6		11											20	
15																	15	
10	26	8	7			10	40	18	26	28	26	21	120	16	18	9	10	
5	28			5		9	36					20		15		8	5	
4																	4	
3	24					8			24	27	24			14		7	3	
2		7	6	4				16		26					15	6	2	
1	22						32			25	22	19	110				1	

This table is based on the average scores in 386 school buildings.

TABLE 22. PERCENTILE NORMS FOR SCHOOL AVERAGES (ADVANCED BATTERY)
Grade 6 (TESTED AT END OF YEAR)

Test A Reading		Test B Work-Study Skills						Test C Language Skills				Test D Arithmetic Skills				
Reading Comprehension	Vocabulary	Map Reading	Use of References	Use of Index	Use of Dictionary	Graphs	Total Score B on Test B	Punctuation	Capitalization	Usage	Spelling	Total Score C on Test C	Fundamental Knowledge	Operations Fundamental	Problems	Total Score D on Test D
99	44	19	13	15	17	15	76	62	72	66	36	230	24	32	11	99
98	30	18	12	14	16	14	72	60	64	64	36	230	22	30	10	98
97	40	28	12	14	16	14	68	56	70	62	34	220	20	28	9	97
96			11	13	15	13	64	56	68	60	32	210	18	24	8	96
95			11	12	14	12	60	52	66	58	30	200	16	22	7	95
90	26	16	10	11	13	11	56	52	64	56	30	200	14	20	6	90
85	36	24	9	10	12	10	52	48	62	54	28	190	12	18	5	85
80			8	9	11	9	48	44	60	52	26	180	10	16	4	80
75			7	8	10	8	44	40	56	50	24	170	8	14	3	75
70			6	7	9	7	40	36	52	48	22	160	6	12	2	70
65			5	6	8	6	36	32	48	44	20	150	4	10	1	65
60			4	5	7	5	32	28	44	40	18	140	3	8		60
55			3	4	6	4	28	24	40	36	16	130	2	6		55
50			2	3	5	3	24	20	36	32	14	120	1	4		50
45			1	2	4	2	20	16	32	28	12	110		2		45
40				1	3	1	16	12	28	24	10	100		1		40
35					2		12	8	24	20	8	90				35
30					1		8	4	20	16	6	80				30
25							4	2	16	12	4	70				25
20							2	1	12	8	2	60				20
15							1		8	4	1	50				15
10									4	2		40				10
5									2	1		30				5
4									1			20				4
3												10				3
2												5				2
1												1				1

This table is based on the average scores in 423 school buildings.

Grade 7 (TESTED AT END OF YEAR)

Test A Reading			Test B Work-Study Skills						Test C Language Skills				Test D Arithmetic Skills			
Comprehension	Vocabulary	Map Reading	Use of References	Use of Index	Use of Dictionary	Graphs	Total Score on Test B	Punctuation	Capitalization	Usage	Spelling	Total Score on Test C	Fundamental Knowledge	Fundamental Operations	Problems	Total Score on Test D
99	52	36	21	14	18	16	82	66			42	245			14	76
98								64	74	68			26	36	13	98
97	48	34	20	16	18	16	80	64				240			12	72
96																
95																
90	44	32	18	15	17	16	76		72	66	40		34		11	68
85																
80																
75																
70																
65																
60																
55																
50																
45																
40																
35	36	26	14	10	13	12	64	66	66	58	34	210	20	28	7	56
30																
25																
20																
15	32															
10																
5																
4																
3	28	20														
2																
1	26	18	10	7	10	9	44	42	54	48		180	14	18	4	36

This table is based on the average scores in 350 school buildings.

TABLE 24. PERCENTILE NORMS FOR SCHOOL AVERAGES (ADVANCED BATTERY)

Grade 8 (TESTED AT END OF YEAR)

Test A Reading		Test B Work-Study Skills						Test C Language Skills						Test D Arithmetic Skills				Percentile Scale	
Reading Comprehension	Vocabulary	Map Reading	Use of References	Use of Index	Use of Dictionary	Graphs	Total Score on Test B	Punctuation	Capitalization	Usage	Spelling	Total Score on Test C	Fundamental Knowledge	Fundamental Operations	Problems	Total Score on Test D			
99	-56	-38	-21	-17	-19	-17	-86	-68	-76	-70	-44	-255	-28	-38	-15	-79	99		
98																	98		
97							-84					250					97		
96																	96		
95	-52	-36		-16	-18	-17	-80	-64	-74	-68	-42			-36		-76	95		
90																	90		
85													-26		-13		85		
80	-48	-34		-15	-17	-16	-76		-72	-66		-240		-34	-12	-72	80		
75																	75		
70															-11		70		
65																	65		
60																	60		
55	-44	-32	-16	-14	-15	-15	-72		-70	-64	-40	-230	-24			-68	55		
50																	50		
45																	45		
40																	40		
35																	35		
30																	30		
25																	25		
20																	20		
15																	15		
10																	10		
5																	5		
4																	4		
3																	3		
2																	2		
1																	1		

This table is based on the average scores in 331 school buildings.

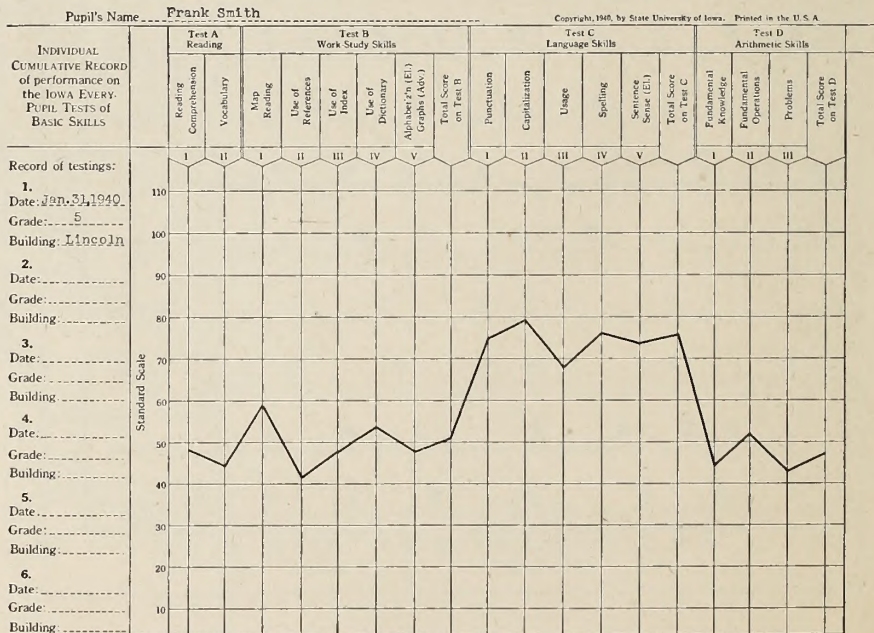
at the extremes of the scale. On Part II of Test A, for example, a third-grade average of 32, made in a certain building, may exceed the scores of only 78 per cent of all pupils tested (see Table 3), but it exceeds the average score made in over 98 per cent of all buildings tested (see Table 19). If only pupil percentile norms were available, the outstanding character of this average score would not be apparent.

Tables 19-24 may, if desired, be used as profile charts for plotting the average scores of any school. To plot the profile of average scores in the third grade of a particular building, for example, one would first locate these average scores along the corresponding vertical scales, and then join the points thus located by straight lines. When the results for several buildings are to be compared, different colored lines may be used for the various buildings. If the profiles for all grades and buildings are thus plotted on Tables 19-24, this booklet will serve as a very convenient and easily interpreted summary of group results for the entire system. These building profiles, which are unique to the Iowa tests, should prove to be a valuable supervisory aid.

6. The Individual Cumulative Record Form

A reduced sample copy of the Individual Cumulative Record form (pupil profile chart) provided with the Iowa Every-Pupil Tests of Basic Skills is presented below. The manner in which the test profile of a pupil may be plotted on this form is explained on the mask supplied for the purpose (Mask for Plotting Scores on Advanced Battery, Form L, or that for the Elementary Battery). The raw score scales are printed on the mask, rather than on the chart itself, in order that the same form may be used (with new masks) in plotting performances of the same pupil on later editions of either battery. The chart thus becomes, as its name implies, a *permanent* individual cumulative record form, which may be kept as an integral part of the pupil's cumulative record folder.

As explained on the masks, the grade-norm equivalent of the pupil's score on any part of the tests can be read directly from the standard scale at the left of the chart. However, the profile will be of interest primarily as a graphic indication of the high and low points in his performance on the battery. His performance is "best," *compared to that of the group used in establishing the norms*, on the test for which his profile is highest, and "poorest" on that for which his profile is lowest. These points may be noted without reference to the grade-norm values. The standard (grade-norm) scale is of interest principally with reference to the general level of the pupil's profile rather than to his score on any single test.

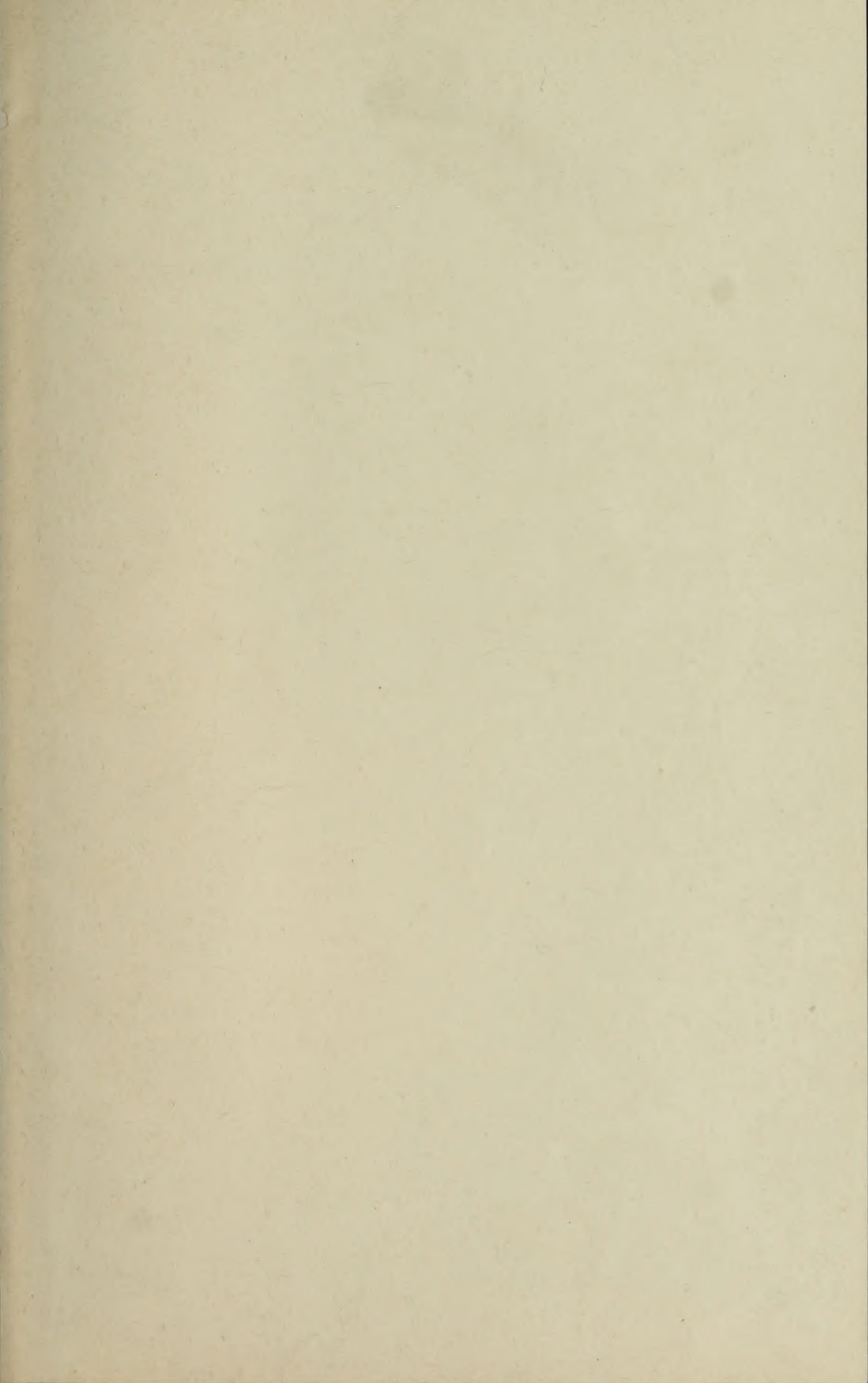


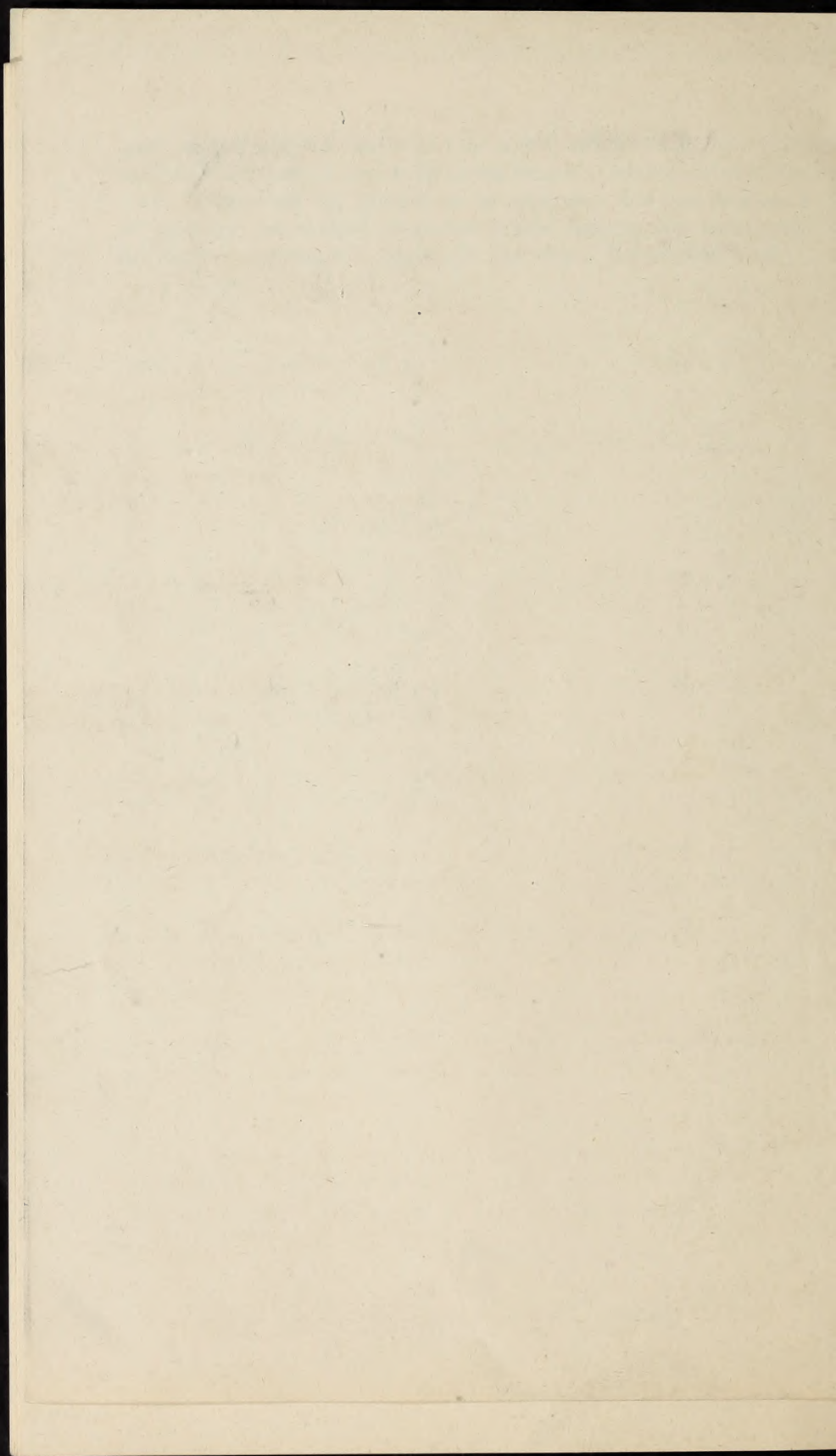
In interpreting the profile, very careful consideration should be given to the difference between *norms* and *standards* (see *Manual for Interpretation*, pages 19-20). If a pupil's profile is high in one test and low in another, it does not necessarily follow that he should devote more attention to the latter area or that his performance in the former is "satisfactory." What constitutes "satisfactory" performance on any test depends in part upon the pupil's individual abilities, interests, needs, and prior opportunities to develop the skills tested, and in part upon one's philosophy of the curriculum. Some schools may willingly sacrifice high proficiency in certain arithmetic skills, for example, in order to find time for other types of instruction in the curriculum. Some pupils may have greater aptitude for or interest in arithmetic than other pupils and should, therefore, be expected to do better on the arithmetic test, etc., etc.

Furthermore, no significance should be attached to minor irregularities in the profile. Variations in the height of the profile no larger than the difference between successive grade norms — and even some larger differences — may often be explained simply in terms of the vagaries of norms and the lack of perfect reliability in the tests. With reference to the sample profile chart, for example, while one might safely conclude that Frank's development in language is definitely superior to that in other areas, the irregularities in the remainder of the profile probably have little or no significance. No test can be made perfectly reliable, and while the Basic Skills tests compare very favorably with most available instruments in this respect, there is still a large element of error in each score. The pupil's profile should, therefore, be considered as only an approximate indication of his relative development in the areas tested. This fact emphasizes the necessity for repeated testing year after year to provide a sound basis for educational guidance.

As has already been suggested, one of the major advantages of this type of profile chart is that it may be used as a permanent *cumulative* record of the pupil's performance on succeeding yearly editions of the Basic Skills battery. Next year, by plotting his new profile on the chart containing his previous profile(s), it will be possible to discover what relative *progress* the pupil has made in the various areas during the intervening year. (Provision is made, along the left-hand margin of the chart, for recording the date on which, and the grade and building in which, each annual edition of the tests is administered. When later profiles are plotted, these may be numbered to correspond to the dates of testing, or different colored lines may be used.) For a pupil now in the third grade, a record may eventually be accumulated of his progress over a six-year period. This record should be particularly valuable in educational guidance, since repeated measurement and the resulting evidence of

comparative progress over a six-year period will obviously be much more indicative of a pupil's special aptitudes than his relative status at any one time. Any school that gives these tests annually and that does not make a systematic use of the Cumulative Record form in this manner will fall far short of deriving full value from the tests it has administered.



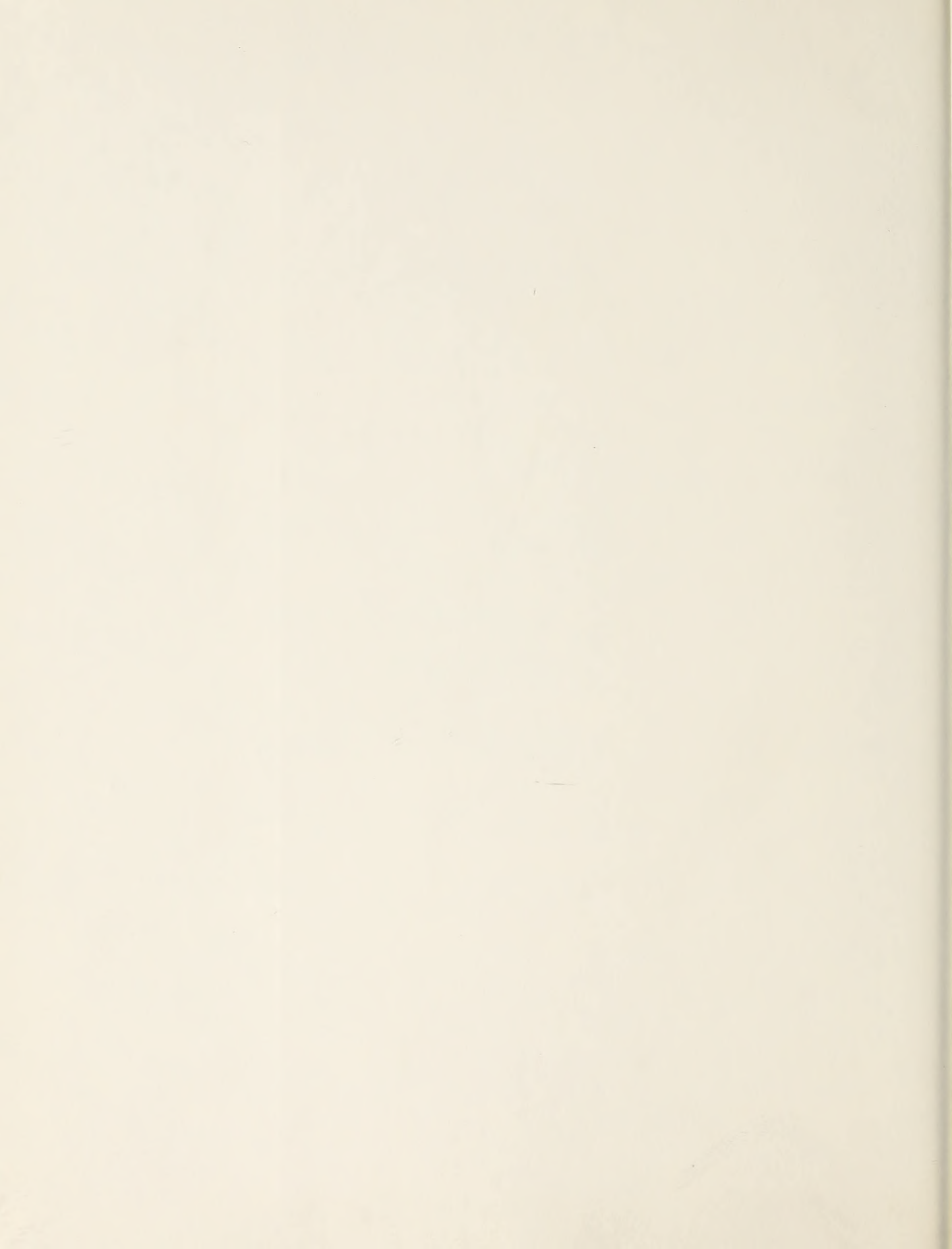


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